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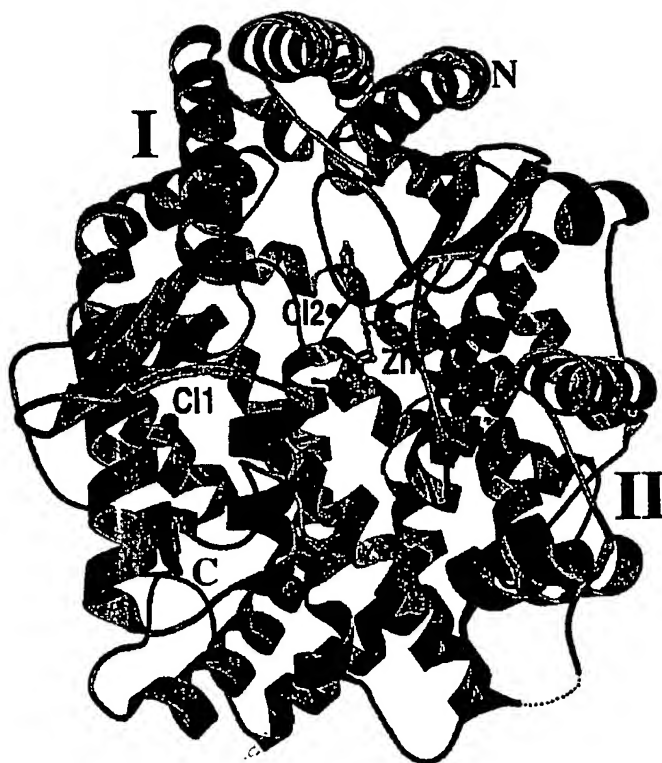
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(54) Title: CRYSTAL STRUCTURE OF AN ANGIOTENSIN-CONVERTING ENZYME (ACE) AND USES THEREOF



(57) Abstract: The present invention relates to a crystal of ACE protein. The present invention further relates to methods, processes, ACE modulators, pharmaceutical compositions and uses of the ACE crystal and the structure co-ordinates thereof.

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CRYSTAL STRUCTURE OF AN ANGIOTENSIN-CONVERTING ENZYME (ACE)
AND USES THEREOF

FIELD OF INVENTION

5 The present invention relates to a crystal. In particular, the present invention relates to a crystal of ACE protein.

The present invention further relates to methods, processes, ACE modulators, pharmaceutical compositions and uses of the ACE crystal and the structure co-
10 ordinates thereof.

BACKGROUND TO THE INVENTION

Angiotensin converting enzyme (peptidyl dipeptidase A, EC 3.4.15.1, ACE) is a
15 membrane-anchored dipeptidyl carboxypeptidase that is essential for blood pressure regulation and electrolyte homeostasis *via* the renin-angiotensin-aldosterone system. The enzyme is a zinc metalloprotease that converts the inactive peptide angiotensin I to angiotensin II, a potent vasoconstrictor. ACE, like many diverse membrane-bound ectoproteins, is released from the membrane by a membrane protease or secretase (1).
20 An understanding of this cleavage-secretion mechanism is important for the development of therapeutic strategies to address the different pathologies caused by defects in the function of the secretase. Substrate determinants that specify cleavage by secretases remain incompletely characterised, but may include the physico-chemical properties of the juxtamembrane ("stalk") sequence or unidentified
25 recognition motifs of the stalk or the extracellular domain. Cleavage of ACE occurs in the stalk sequence and the solubilizing protease is constrained topologically, in terms of the number of residues between the cleavage site and the proximal extracellular domain of ACE. However, the ACE secretase appears to be remarkably versatile in terms of its substrate specificity (2,3).

30

The active sites of ACE and carboxypeptidase A, a prototypic zinc metalloprotease, are understood to be very similar and this similarity is exploited in the design of the first generation of ACE inhibitors. The clinical success of these inhibitors - such as captopril and enalapril - in the treatment of hypertension and congestive heart failure

is well established. However, the side effects such as persistent cough which effects up to 20 % of patients and angioedema which is less common, together with limitations such as their contraindication in patients with impaired renal function and decreased efficacy in patients with low-renin hypertension, underscore the need for
5 more specific and selective inhibitors.

There are two isoforms of ACE that are transcribed from the same gene in a tissue specific manner. In somatic tissues it exists as a glycoprotein composed of a single large polypeptide chain of 1277 amino acids whereas the germinal form is synthesised
10 as a lower molecular mass isozyme and is thought to play a role in sperm maturation and the binding of sperm to the oviduct epithelium. The somatic form consists of two domains (N- and C-domain), each containing an active site with a conserved HEXXH zinc-binding motif and a glutamate some 24 residues downstream which forms the third zinc ligand (Williams et al., 1994). The two domains differ in their substrate
15 specificities; inhibitor and chloride activation profiles; and physiological functions. There are two N-domain-specific substrates: the hemoregulatory peptide *N*-acetyl-seryl-aspartyl-lysyl-proline (AcSDKP) which controls hematopoietic stem cell differentiation and proliferation; and the bradykinin potentiating peptide angiotensin-(1-7). On the other hand, both active sites catalyse the hydrolysis of angiotensin I and
20 the vasodilator bradykinin with similar efficiency. However, inhibition of the N-domain with a phosphinic peptide RXP407 has no effect on blood pressure regulation (Junot et al., 2001) and, furthermore, expression of the N-domain only, in transgenic mice produced a phenotype similar to the ACE knockout mice (Esther et al., 1997). Thus, the C-domain appears to be necessary and sufficient for controlling blood
25 pressure and cardiovascular function. Testis ACE (tACE) is identical to the C-terminal half of somatic ACE, except for a unique 36-residue sequence constituting its amino terminus, thus this isoform is selected for initial efforts to obtain a three-dimensional structure.

30 The cDNA sequence of human testicular ACE has been described (Ehlers et al. (1989) *Proc. Nat. Acad. Sci.* 86: 7741-7745) and the predicted protein consists of a 732-residue preprotein including a 31-residue signal peptide. The mature polypeptide has a molecular weight of 80,073 (unglycosylated form).

Despite the pivotal role of ACE, there have been no reports disclosing that suitable crystals have been or could be obtained for this enzyme and so the X-ray crystallographic analysis of such proteins has been impossible.

5 SUMMARY OF THE INVENTION

The present invention is based upon the seminal finding of the first three-dimensional structure of the ACE protein.

10 Peptidases, for example, thermolysin and carboxypeptidase A that have been used in comparative molecular field analysis and 3D quantitative structure-activity relationship studies of ACE (Waller & Marshall, 1993) show no homology with the structure of ACE described herein. Surprisingly, ACE shows significant structural homology with that of neurolysin, a member of the M3 family of thimet
15 oligopeptidases. The two proteins do not share any amino acid sequence identity (close to random score), yet when the two structures are optimally superimposed using DALI server (Holm & Sander, 1999), there is noticeable match with a root mean square (r.m.s.) deviation of 4.0 Å for 143 C α atoms. Accordingly, the structure presented herein may be used for the development of novel, highly selective ACE
20 modulators with the potential for greater efficacy, fewer side effects and treatment of new indications.

Thus, in a first aspect, the present invention relates to a crystal of ACE protein.

25 Preferably, the ACE protein is underglycosylated.

Preferably, the ACE protein is underglycosylated by removing one or more glycosylation sites and/or one or more partially glycosylated sites. More preferably, the underglycosylated ACE protein is deglycosylated at amino acids 337 and 586 or
30 amino acids 90, 109, 155, 337 and 586 of SEQ ID No 2.

Preferably, the crystal comprises atoms arranged in a spatial relationship represented by at least a portion of the structure co-ordinates of Table A or Table B.

Preferably, the crystal belongs to the space group $P2_12_12_1$.

Preferably, the crystal has the unit cell dimensions: $a=56.47 \text{ \AA}$, $b=84.90 \text{ \AA}$ and $c=133.99 \text{ \AA}$.

5

Preferably, the crystal is a crystal of human ACE protein.

Preferably, the crystal further comprises an entity bound to the ACE protein or a portion thereof. More preferably, the entity is bound to the ACE protein or a portion thereof by contacting one or more residues of the ACE protein selected from: His384, Ala385, Lys542, Tyr551, Tyr554, Glu415 and His544. More preferably, the entity modulates the activity of ACE. More preferably, the entity is an inhibitor of ACE – such as lisinopril or a derivative thereof.

15 In a second aspect, the present invention relates to a method of preparing a crystal of ACE protein comprising the steps of: (a) culturing host cells comprising an underglycosylated ACE protein; (b) purifying the underglycosylated ACE protein; and (c) crystallising the underglycosylated ACE protein.

20 Preferably, the ACE protein is underglycosylated by removing one or more glycosylation sites and/or one or more partially glycosylated sites. More preferably, the underglycosylated ACE protein is deglycosylated at amino acids 337 or amino acids 90, 109, 155, 337 and 586 of SEQ ID No 2.

25 Preferably, the ACE protein is crystallised using about 10 mM HEPES and about 0.1% PMSF with an equal volume of a reservoir solution containing about 15 % PEG 4000, about 50 mM $\text{CH}_3\text{COONa} \cdot 3\text{H}_2\text{O}$ pH 4.7 and about 10 μM $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$.

30 Preferably, the crystal that is prepared has a structure defined by at least a portion of the structure co-ordinates of Table A or Table B.

Preferably, the crystal belongs to the space group $P2_12_12_1$.

Preferably, the crystal has the unit cell dimensions: $a=56.47 \text{ \AA}$, $b=84.90 \text{ \AA}$ and $c=133.99 \text{ \AA}$.

Preferably, the ACE protein is human ACE protein.

5

Preferably, the crystal further comprises an entity bound to the ACE protein. More preferably, the entity modulates the activity of ACE. More preferably, the entity is an inhibitor of ACE – such as lisinopril or a derivative thereof. More preferably, the crystal that is prepared has a structure defined by at least a portion of the structure co-ordinates of Table B.

10

In a third aspect, the present invention relates to a method of screening for a modulator of ACE wherein the method comprises the use of a crystal according to the present invention. Preferably, the method comprises the steps of: (a) providing at least a portion of the structure co-ordinates of Table A or Table B; (b) employing at least a portion of the structure co-ordinates of Table A or Table B to design or select or synthesise a putative modulator of ACE; (c) contacting the putative modulator of ACE with ACE or a mutant, variant, homologue, derivative or fragment thereof in the presence of a substrate; and (d) screening the putative modulator of ACE in an assay for the potential to modulate ACE.

15

20

Preferably, at least a portion of the structure co-ordinates of Table A or Table B and/or the putative modulator of ACE and/or the substrate are provided on a machine-readable data storage medium comprising a data storage material encoded with machine readable data.

25

Preferably, the putative ACE modulator is from a library of compounds.

Preferably, the putative ACE modulator is selected from a database.

30

Preferably, the putative ACE modulator is designed *de novo*.

Preferably, the putative ACE modulator is designed from a known ACE modulator.

Preferably, the design or selection of the putative ACE modulator is performed in conjunction with computer modelling.

Preferably, the putative ACE modulator is useful in the prevention and/or treatment of an ACE related disorder. More preferably, the ACE related disorder is hypertension.

In a fourth aspect, the present invention relates to a process comprising the steps of: (a) performing the method according to the third aspect of the present invention; (b) identifying one or more modulators of ACE; and (c) preparing a quantity of those one or more ACE modulators.

In a fifth aspect, the present invention relates to a process comprising the steps of: (a) performing the method according to the third aspect of the present invention; (b) identifying one or more ACE modulators; and (c) preparing a pharmaceutical composition comprising those one or more identified ACE modulators.

In a sixth aspect, the present invention relates to a process comprising the steps of: (a) performing the method according to the third aspect of the present invention; (b) identifying one or more ACE modulators; (c) modifying those one or more ACE modulators; and (d) optionally preparing a pharmaceutical composition comprising those one or more ACE modulators.

In a seventh aspect, the present invention relates to a method of obtaining structural information about a molecule or a molecular complex of unknown structure by using at least a portion of the structure co-ordinates of ACE, comprising the steps of: (a) generating X-ray diffraction data from a crystallised molecule or molecular complex; (b) applying at least a portion of the structure co-ordinates of ACE to said X-ray diffraction pattern to generate a three dimensional electron density map of at least a portion of the molecule or molecular complex; and (c) using all or a portion of the structure co-ordinates of ACE to generate homology models of ACE.

In an eighth aspect, the present invention relates to an ACE modulator identified by the method according to the third aspect of the present invention. Preferably, the ACE modulator inhibits ACE.

- 5 In a ninth aspect, the present invention relates to a pharmaceutical composition comprising an ACE modulator according to the seventh aspect of the present invention and a pharmaceutically acceptable carrier, diluent, excipient or adjuvant or any combination thereof.
- 10 In a tenth aspect, the present invention relates to a method of preventing and/or treating an ACE related disorder comprising administering a modulator of ACE according to the seventh aspect of the present invention and/or a pharmaceutical according to the eighth aspect of the present invention, wherein said modulator of ACE or said pharmaceutical is capable of causing a beneficial preventative and/or
- 15 therapeutic effect.

In an eleventh aspect, the present invention relates to a computer for producing a three-dimensional representation of ACE wherein said computer comprises: (a) a computer-readable data storage medium comprising a data storage material encoded

20 with computer-readable data, wherein said data comprises the structure co-ordinates of ACE; (b) a working memory for storing instructions for processing said computer-readable data; (c) a central-processing unit coupled to said working memory and to said computer-readable data storage medium for processing said computer-machine readable data into said three-dimensional representation; and (d) a display coupled to

25 said central-processing unit for displaying said three-dimensional representation.

In a twelfth aspect, the present invention relates to a machine-readable data storage medium comprising a data storage material encoded with machine-readable data, wherein the data is defined by at least a portion of the structure co-ordinates of ACE

30 in Table A or Table B.

In a thirteenth aspect, the present invention relates to the use of an ACE crystal in the preparation of a medicament to prevent and/or treat an ACE related disorder. Preferably, the ACE related disorder is hypertension.

- 5 In a fourteenth aspect, the present invention relates to the use of at least a portion of the structure co-ordinates of Table A or Table B to screen for modulators of ACE.

- In a fifteenth aspect, the present invention relates to the use of at least a portion of the structure co-ordinates of Table A or Table B to solve the structure of the crystalline
10 form of any other protein with significant amino acid sequence homology to any functional domain of ACE.

- In a sixteenth aspect, the present invention relates to the use of at least a portion of the structure co-ordinates of Table A or Table B in molecular design techniques to design,
15 select and synthesise modulators of ACE.

- In a seventeenth aspect, the present invention relates to the use of at least a portion of the structure co-ordinates of Table A or Table B in the development of compounds that can isomerise to reaction intermediates in the chemical reaction of a substrate or
20 other compound that binds to ACE.

- In an eighteenth aspect, the present invention relates to the use of at least a portion of the structure co-ordinates of Table A or Table B to screen small molecule databases for chemical entities or compounds that modulate ACE.
25

- In a nineteenth aspect, the present invention relates to the use of at least a portion of the structure co-ordinates of Table A or Table B to solve the structure of the crystalline form of any other protein with significant amino acid sequence homology to any functional domain of ACE. Preferably, the structure of the crystalline form of any
30 other protein with significant amino acid sequence homology to any functional domain of ACE is solved using molecular replacement.

In a twentieth aspect, the present invention relates to the expression vectors pLEN-tACE Δ 36g(1, 2, 3, 4) and pLEN-tACE Δ 36g(1,3).

DETAILED DESCRIPTION OF THE INVENTION

ACE PROTEIN

5

ACE (EC 3.4.15.1) is a peptidyl dipeptide hydrolase. It catalyzes the hydrolysis of the penultimate peptide bond at the C-terminal end of a variety of acylated tripeptides and larger polypeptides having an unblocked alpha-carboxy group having a free C-terminus. The reactivity of the enzyme varies markedly depending on the substrate.

10

As used herein, the term "ACE protein" includes all vertebrate and mammalian forms and is intended to cover mutants, variants, homologues, derivatives and fragments thereof. Preferably, the mutants, variants, homologues, derivatives and fragments thereof have the activity of the naturally occurring ACE.

15

There are two isoforms of ACE that are transcribed from the same gene in a tissue specific manner. In somatic tissues, it exists as a glycoprotein composed of a single large polypeptide chain of 1277 amino acids whereas the germinal form is synthesised as a lower molecular mass isozyme and is thought to play a role in sperm maturation and the binding of sperm to the oviduct epithelium. The somatic form consists of two domains (N- and C-domain), each containing an active site with a conserved HEXXH zinc-binding motif and a glutamate some 24 residues downstream which forms the third zinc ligand (Williams et al., 1994). The two domains differ in their substrate specificities; inhibitor and chloride activation profiles; and physiological functions.

25 There are two N-domain-specific substrates: the hemoregulatory peptide *N*-acetylseryl-aspartyl-lysyl-proline (AcSDKP) which controls hematopoietic stem cell differentiation and proliferation; and the bradykinin potentiating peptide angiotensin-(1-7). On the other hand, both active sites catalyse the hydrolysis of angiotensin I and the vasodilator bradykinin with similar efficiency. However, inhibition of the N-

30 domain with a phosphinic peptide RXP407 had no effect on blood pressure regulation (Junot et al., 2001) and, furthermore, expression of the N-domain only, in transgenic mice produced a phenotype similar to the ACE knockout mice (Esther et al., 1997). Thus, the C-domain appears to be necessary and sufficient for controlling blood pressure and cardiovascular function. Testis ACE (tACE) is identical to the C-

terminal half of somatic ACE, except for a unique 36-residue sequence constituting its amino terminus.

Further background teachings on ACE have been presented by Victor A. McKusick *et al.* at <http://www3.ncbi.nlm.nih.gov/Omim/searchomim.htm>. The following information concerning ACE has been extracted from that source.

Angiotensin I-converting enzyme or kininase II, is a dipeptidyl carboxypeptidase that plays an important role in blood pressure regulation and electrolyte balance by hydrolyzing angiotensin I into angiotensin II, a potent vasopressor, and aldosterone-stimulating peptide. The enzyme is also able to inactivate bradykinin, a potent vasodilator.

Ehlers *et al.* (1989) *Proc. Nat. Acad. Sci.* 86: 7741-7745 determined the cDNA sequence for human testicular ACE. The predicted protein is identical, from residue 37 to its C terminus, to the second half or C-terminal domain of the endothelial ACE sequence. The inferred protein sequence consists of a 732-residue preprotein including a 31-residue signal peptide. The mature polypeptide has a molecular weight of 80,073.

Howard *et al.* (1990) *Mol. Cell. Biol.* 10: 4294-4302, found that the testis-specific form of ACE has its own promoter within intron 12, is encoded by the 3-prime region of the gene, and is found only in postmeiotic spermatogenic cells and sperm.

Although angiotensin-converting enzyme has been studied primarily in the context of its role in blood pressure regulation, this widely distributed enzyme has many other physiologic functions. The ACE gene encodes 2 isozymes. The somatic ACE isozyme is expressed in many tissues, including vascular endothelial cells, renal epithelial cells, and testicular Leydig cells, whereas the testicular or germinal ACE isozyme is expressed only in sperm Ramaraj *et al.*, (1998) *J. Clin. Invest.* 102: 371-378.

Brown *et al.* (1996) *Clin. Pharmacol. Therapeutics* 60: 8-13 found an association between the use of certain ACE inhibitors (lisinopril or enalapril vs captopril) and emergent angioedema in the African-American population of Tennessee. The adjusted relative risk of angioedema was 4.5 (95% CI, 2.9-6.8) in blacks compared to whites. The African-American patients were more severely affected: 7 of the 8 patients admitted to the intensive care unit were black, as were all patients who required intubation. African-American users of ACE inhibitors tended to be younger and female when compared to their white counterparts. The rate of angioedema was highest within the first 30 days of use (5.79 per 1000 patient-years) compared to long-term use (1.04 per 1000 patient-years).

Large-scale trials of therapy for heart failure showed improvements in outcome with ACE inhibitors and beta-blockers. These results led to the recommendation that all patients who have heart failure accompanied by a low ejection fraction and who can tolerate ACE inhibitors and beta-blockers should be treated with both agents. Exner *et al.* (2001) *New Eng. J. Med.* 344: 1351-1357 focused on the fact that black patients with heart failure have a poorer prognosis than white patients and performed a study comparing racial groups. They found that whereas therapy with enalapril is associated with significant reduction in the risk of hospitalization for heart failure among white patients with left ventricular function, it had no such effect in similar black patients. The explanation for the lesser response to the ACE inhibitor in black patients was not clear.

Mattei *et al.* (1989) *Cytogenet. Cell Genet.* 51: 1041 assigned the ACE gene to 17q23 by *in situ* hybridization. Using a DNA marker at the growth hormone gene locus, which they characterized as 'extremely polymorphic' and which showed no recombination with ACE, Jeunemaitre *et al.* (1992) *Nature Genet.* 1: 72-75, mapped ACE to 17q22-q24, consistent with

the in situ hybridization mapping to 17q23. A demonstration of linkage between the ACE locus and elevated blood pressure in a rat model of hypertension pointed to ACE as a candidate gene in human hypertension. In studies of hypertensive families, they found no evidence to support linkage between the ACE locus and the disease, however.

Krege et al. (1995) *Nature* 375: 146-148 investigated the role of the ACE gene in blood pressure control and reproduction using mice generated to carry an insertional mutation that was designed to inactivate both forms of Ace. All homozygous female mutants were found to be fertile, but the fertility of homozygous male mutants was greatly reduced. Heterozygous males but not females had blood pressures that were 15 to 20 mm Hg less than normal, although both male and female heterozygotes had reduced serum Ace activity.

Although significant ACE activity is found in plasma, the majority of the enzyme is bound to tissue such as vascular endothelium. Esther et al. (1997) *J. Clin. Invest.* 99: 2375-2385, used targeted homologous recombination to create mice expressing a form of ACE that lacks the C-terminal half of the molecule. This modified ACE protein was catalytically active but entirely secreted from cells. Mice that expressed only this modified ACE had significant plasma ACE activity but no tissue-bound enzyme. These animals had low blood pressure, renal vascular thickening, and a urine-concentrating defect. The phenotype was very similar to that of completely ACE-deficient mice previously reported, except that the renal pathology was less severe. These studies strongly supported the concept that the tissue-bound ACE is essential for the control of blood pressure and the structure and function of the kidney.

ACE gene knockout mice lack both isozymes and exhibit low blood pressure, kidney dysfunctions, and male infertility. Ramaraj et al. (1998) *J. Clin. Invest.* 102: 371-378, reported the use of a sperm-specific promoter and interbreeding of transgenic and gene knockout mice for generating a mouse strain that expressed ACE only in sperm. The experimental mice maintained the kidney defects of ACE ^{-/-} mice, but unlike the knockout strain, the males were fertile. Thus, Ramaraj et al. (1998) established that the role of ACE in male fertility is completely dependent on its exclusive expression in sperm. Their study demonstrated how transgenic and knockout techniques can be combined for ascribing a specific physiologic function to the expression of a multifunctional protein in a given tissue.

Hagaman et al. (1998) *Proc. Nat. Acad. Sci.* 95: 2552-2557 used transgenic mice lacking somatic and testis ACE to investigate the male fertility defect. They demonstrated that mice lacking both somatic and testis ACE isozymes have defects in sperm transport within the oviducts and in binding to zonae pellucidae. Males generated by gene targeting experiments that lack somatic ACE but retain testis ACE are fertile. Both male and female mice lacking angiotensinogen have normal fertility. The authors found that males heterozygous for the mutation inactivating both ACE enzymes had offspring of wildtype and heterozygous genotypes at the same frequency, suggesting that sperm carrying the mutation are not at a selective disadvantage.

Nephropathy of type I diabetes is associated with the D allele of the insertion/deletion (I/D) polymorphism in intron 16 of the ACE gene. The D allele determines higher enzyme levels. To address causality underlying this association, Huang et al. (2001) *Proc. Nat. Acad. Sci.* 98: 13330-13334 induced diabetes in mice having 1, 2, or 3 copies of the Ace gene, normal blood pressure, and an enzyme level range (65-162% of wildtype) comparable to that seen in humans. Twelve weeks later, the 3-copy diabetic mice had increased blood pressures and overt proteinuria. Proteinuria was correlated to plasma ACE level in the 3-copy diabetic mice. Thus, a modest genetic increase in ACE levels was sufficient to cause nephropathy in diabetic mice.

CRYSTAL

In one aspect of the present invention, there is provided a crystal of ACE protein.

As used herein, the term "crystal" means a structure (such as a three dimensional (3D) solid aggregate) in which the plane faces intersect at definite angles and in which there is a regular structure (such as internal structure) of the constituent chemical species. Thus, the term "crystal" can include any one of: a solid physical crystal form
5 such as an experimentally prepared crystal, a 3D model based on the crystal structure, a representation thereof - such as a schematic representation thereof, a diagrammatic representation thereof, or a data set thereof for a computer.

The crystals of the present invention may be prepared by purifying ACE protein and
10 then crystallising the purified protein. The ACE protein may also be prepared by expressing a nucleotide sequence encoding the ACE protein in a suitable host cell.

In a preferred embodiment, the crystals of the present invention are prepared by purifying underglycosylated ACE protein and then crystallising the purified
15 underdeglycosylated protein. The underdeglycosylated ACE protein may also be prepared by expressing a nucleotide sequence encoding the underdeglycosylated ACE protein in a suitable host cell.

ACE may be purified using various methods known to a person skilled in the art, for
20 example, from conditioned media by affinity chromatography on a Sepharose-28-lisinopril affinity resin (Yu *et al.* 1997). The protein may be quantified by amino acid analysis and assayed for activity using the substrate hippuryl-L-histidyl-L-leucine, as described previously (Ehlers, MRE, Chen, Y -N, Riordan, JF (1991) *Proc. Natl. Acad. Sci.* USA 88, 1009-1013).

25

The purified ACE proteins may be stored at -20 °C in 10 mM HEPES and 0.1% PMSF.

Concentration may be performed with the aid of a filtration system and the protein
concentrate may be immediately used for crystallisation purposes. The protein
30 concentrate may be crystallised using, for example, the vapour diffusion hanging drop method at a temperature of from about 1 °C to about 30 °C, preferably from about 4 °C to about 20 °C, more preferably at about 16 °C. The crystallisation temperature may be dependent on the additives present in the protein solution.

Typically, the best crystals for ACE proteins are grown at 16 °C by the vapour diffusion hanging drop method by mixing 2 µl of the protein solution at ~11.5 mg/ml in 10 mM HEPES and 0.1% PMSF with an equal volume of a reservoir solution
5 containing 15 % PEG 4000, 50 mM CH₃COONa.3H₂O pH 4.7 and 10 µM ZnSO₄.7H₂O. Crystals usually appear within 2 weeks and grow to their maximum size after about a month.

The design of ACE inhibitors has been based upon the assumption that the structure
10 of ACE is related to that of peptidases - such as thermolysin (MA clan, M2 family) and carboxypeptidase A (MC clan, M14 family) as evidenced by comparative molecular field analysis and 3D quantitative structure-activity relationship studies of ACE (Waller & Marshall, 1993). Marshall & Cramer (1988) *Trends Pharmacol. Sci.* 9, 285-289 have also reported the development of predictive models for inhibitors
15 of ACE and thermolysin. Surprisingly, the structure of ACE described herein, shows no structural homology with thermolysin but shows significant structural homology with neurolysin, a member of the M3 family of thimet oligopeptidases. Therefore, the structure presented herein, may be effectively used for the development of novel, highly selective ACE modulators with the potential for greater efficacy, fewer side
20 effects and treatment of new indications. In addition, the unanticipated similarity with neurolysin has shown the structural conservation amongst an emerging family of peptidases with a common evolutionary origin.

Without wishing to be bound by theory, it appears that the core structure of the two
25 proteins is highly similar with different loop structures on the outer surface in the case of neurolysin. Indeed like ACE, neurolysin also belongs to the family of metallopeptidases bearing the HEXXH active site motif (Rawlings and Barrett, 1995; Brown *et al.*, 2001). The striking similarity also extends to the active site region in neurolysin consisting of a deep narrow channel that divides the molecule into two
30 halves. It has been speculated that using the flexible secondary structure elements in the active site cavity, the neuropeptidase can effectively cleave a variety of small peptides. Likewise in ACE, the geometry of the active site groove clearly accounts for ACE's inability to hydrolyse large, folded substrates. Furthermore, the enzyme's

preference for oligopeptide substrates of about thirteen residues or less suggests that the substrate does not have the same freedom to extend outside of the channel during catalysis. Peptidases - such as thermolysin (MA clan, M4 family) and carboxypeptidase A (MC clan, M14 family) - which have been used in comparative
5 molecular field analysis and 3D quantitative structure-activity relationship studies (Waller & Marshall, 1993) show no structural homology with ACE.

A crystal according to any one of the preceding claims comprising atoms arranged in a spatial relationship represented by at least a portion of the structure co-ordinates of
10 Table A or Table B.

Preferably, the crystal belongs to the space group $P2_12_12_1$ and has a unit cell with dimensions of: $a=56.47 \text{ \AA}$, $b=84.90 \text{ \AA}$, $c=133.99 \text{ \AA}$.

15 Preferably, the crystal is a crystal of human ACE protein.

Complexes may be obtained by growing the crystals in the presence of an entity - such as a test compound. In these experiments the protein solution is mixed with the entity and an equal volume of the reservoir solution before setting up the
20 crystallisation. Single crystals suitable for diffraction work typically appear after about 4 weeks.

Typically, the protein comprising ACE is purified to homogeneity for crystallisation. Purity of ACE may be measured by typical techniques such as SDS-PAGE, mass
25 spectrometry and hydrophobic HPLC.

The crystal structure of the invention may contain a portion - such as at least 25%, at least 50%, at least 75%, or preferably at least 90%, at least 95%, at least 98%, or at least 99% - of the co-ordinates listed in Table A or Table B. Preferably, the crystal
30 structure of the invention contains all of the co-ordinates listed in Table A or Table B.

Preferably, the crystal is usable in X-ray crystallography techniques.

Preferably, the crystals used can withstand exposure to X-ray beams used to produce diffraction pattern data necessary to solve the X-ray crystallographic structure.

Preferably, prior to data collection, the crystals are flash-cooled at about 100 K in a cryoprotectant. More preferably, cryoprotectant contains 15 % PEG 4000, 50 mM $\text{CH}_3\text{COONa} \cdot 3\text{H}_2\text{O}$ pH 4.7, 10 μM $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$ and 25% glycerol.

The X-ray data may be collected at a Synchrotron Radiation Source. Preferably, the X-ray data are collected at a Synchrotron Radiation Source at 100 °K.

Preferably, the crystal has a resolution determined by X-ray crystallography of about 3.5Å or less, more preferably a resolution of about 2.8Å or less, more preferably, a resolution of about 2 Å or less, more preferably, a resolution of about 1.5Å or less, most preferably, 1 Å or less.

DEGLYCOSYLATION AND UNDERGLYCOSYLATION

Many proteins in eukaryotic cells are glycoproteins that contain oligosaccharide chains covalently linked to certain amino acids. Glycosylation is known to affect protein folding, localisation and trafficking, protein solubility, antigenicity, biological activity and half-life, as well as cell-cell interactions.

Protein glycosylation can be divided into four main categories mainly depending on the linkage between the amino acid and the sugar. These are N-linked glycosylation, O-linked glycosylation, C-mannosylation and GPI anchor attachments. N-glycosylation is characterised by the addition of a sugar to the amino group of an asparagine. In O-glycosylation, a sugar is attached to the hydroxyl group of a serine or threonine residue.

For N-glycosylation, the sequence motif Asn-Xaa-Ser/Thr (wherein Xaa is any amino acid other than Pro) has been defined as a prerequisite for glycosylation. Although rare, the sequence motif Asn-Xaa-Cys can also be an acceptor site. N-glycans can be subdivided into three distinct groups called 'high mannose type', 'hybrid type', and 'complex type', with the common pentasaccharide core - $\text{Manp}(\alpha 1,6)\text{-}(\text{Manp}(\alpha 1,3))\text{-Manp}(\beta 1,4)\text{-Glc pNAc}(\beta 1,4)\text{ Glc pNAc}(\beta 1,\text{N})\text{-Asn}$ - occurring

in all three groups. The relationship between all three types can be ascribed to the fact that they originate from one precursor oligosaccharide which contains the described common pentasaccharide core Man₃-GlcNAc₂, and some additional sugar residues and the non-reducing end, and is then processed enzymatically to yield these three types.

5 Since the hydroxyl group of Ser/Thr is thought to be involved in hydrogen bonding during the enzymatic attachment of the oligosaccharide precursor molecule to yield a favourable conformation for the action of the oligosaccharyltransferase, it has been suggested for proline that the steric hindrance might be too large (Kornfeld (1985) Ann. Rev. Biochem. 54: 631-64), preventing glycosylation at Pro containing sites. The

10 negative influence of aspartic acid towards glycosylation can be ascribed to the negative charge on the side chain of this residue. In addition some cases have been reported where Ser/Thr is replaced by cysteine. While Ser replacement by Cys generally leads to decreased glycosylation, it has been shown (Kasturi 1995 J. Biol. Chem. 270: 14756-61) that substitution by Thr at a given potential glycosylation site can lead to increased

15 glycosylation. This is in accordance with the model of hydrogen bonding being an important factor during the attachment of the precursor molecule to the protein. Although there are usually many potential glycosylation sites in a protein it has been estimated that glycosylation occurs only at one third of them. Mostly at those sites where the surrounding amino acids allow the formation of a beta turn.

20

Various glycoforms of ACE have been described. By way of example, Sadhukhan & Sen (3a) disrupted specific glycosylation sites in rabbit tACE to elucidate the glycosylation requirements for the expression and processing of active testis ACE. There are five potential *N*-linked glycosylation sites in the rabbit tACE sequence, with

25 an additional six in the somatic form (4a). A null mutant, where all five sites had been disrupted, behaved similarly to wild-type tACE expressed in the presence of the glycosylation-inhibitor, tunicamycin. It was degraded intracellularly and failed to be detected in culture medium, confirming previous findings that tACE requires *N*-linked glycosylation to be expressed in an active form (5a and 3a). Expression of the

30 remaining mutants showed a preference for *N*-linked glycosylation at the N-terminus and that the presence of sugars at a single N-terminal site was necessary and sufficient to produce enzymatically-active tACE that was solubilised. The presence of glycosylation is not site-specific, as mutants that have either the first site or second site intact are expressed and active. However, glycosylation at the third site alone is

not sufficient to produce active protein in HeLa cells, albeit this mutant was expressed in yeast (3a), indicating that the requirements for glycosylation are cell-specific.

In human testis ACE *O*-linked sugars are not necessary for expression, implicating the
5 *N*-linked sugars in this role (6a). *N*-linked glycosylation of human tACE expressed in CHO cells at each site has been identified by MALDI-TOF mass spectrometry (7a). There are seven potential *N*-linked sites in human tACE, five of which are complementary to the sites in rabbit tACE (7a). The unique sites lie within the ectodomain (the fourth site) and in the juxtamembrane stalk region, adjacent to the
10 cleavage site (the seventh site). As with the rabbit form, there appears to be a preference for glycosylation at the N-terminus as evidenced by MALDI-TOF mass spectrometry of glycosylation sites (7a). Inhibition of complex oligosaccharide formation using a glucosidase I inhibitor *N*-butyldeoxynojirimycin (NB-DNJ) led to the production of an active glycoform that was electrophoretically homogeneous (7a).

15

Suitably, the crystal of the ACE protein may comprise de-glycosylated ACE protein or a fragment thereof. For example, the deglycosylated ACE may comprise the sequence presented as SEQ ID No. 2.

20 To deglycosylate the ACE protein, various methods known to a person skilled in the art may be used. Both chemical and enzymatic methods may be used for removing oligosaccharides from glycoproteins. Hydrazinolysis of glycoproteins (Kuraya, N & Hase (1992) J Biochem (Tokyo) 112:122-126), is capable of removing both N- and O-linked sugars, although this results in the complete destruction of the protein
25 component and is therefore not suitable if recovery of the protein is desirable. Milder chemical methods such as trifluoromethanesulphonic acid (TFMS) may be used, however this may result in incomplete sugar removal and partial protein destruction. Other methods – such as site directed mutagenesis of glycosylated amino acids may also be used.

30

Suitably, enzymatic methods may be used which provide for complete sugar removal with no protein degradation.

Use of the enzyme PNGase F is an effective method of removing virtually all N-linked oligosaccharides from glycoproteins (Tarentino & Plummer (1994). Methods in Enzymol 230: 44-57). The oligosaccharide is left intact and therefore suitable for further analysis (the asparagine residue from which the sugar was removed is deaminated to aspartic acid, the only modification to the protein).

Other commonly used endoglycosidases include Endoglycosidase H (Kobata (1979) Anal Biochem 100:1-14) and Endoglycosidase F (Trimble & Tarentino (1991) J. Biochem. 266:1646-1651). In a preferred method, the ACE protein is digested with Endoglycosidase H (30 mU) in a suitable buffer – such as 100 mM sodium phosphate, 0.1 mM ZnCl₂ and 1% BSA, pH 6.0 for 16 h at 37°C. The endo H-treated protein is passed through a lectin affinity column consisting of equal parts of concanavalin A, wheat germ, and lentil lectin, after equilibration with 20 mM Tris-HCl, 0.5 M NaCl at pH 7.4. The deglycosylated ACE is collected in the flowthrough. Free oligosaccharides and any other impurities are removed from the flowthrough fraction by a final lisinopril-Sepharose affinity chromatography step. The homogeneity of the ACE protein after deglycosylation is confirmed by SDS-PAGE on a 4-20% acrylamide gel and MALDI-TOF mass spectrometry.

Commercially available kits may also be used – such as the E-DEGLY kit (Sigma-Aldrich, UK) and the GlycoFree Deglycosylation Kit (Glyco, Novato, USA) which removes both N- and O-linked glycans from glycoproteins.

Preferably, ACE is crystallised using underglycosylated ACE protein.

As used herein, the term “underglycosylated” means that one or more of the oligosaccharide chains covalently linked to amino acids in the glycosylated protein are no longer present.

By way of example only, testis ACE is glycosylated at amino acids 72, 90 and 109 and glycosylated partially at amino acids 155, 337 and 586. Accordingly, the “underglycosylated” testis ACE may not be glycosylated a one or more of amino acids 72, 90, 109, 155, 337 and 586.

The underglycosylated ACE protein may be prepared using various methods - such as site directed mutagenesis and glycosylation inhibition methods. For example, glycosylation inhibition methods using NB-DNJ may prevent the formation of complex oligosaccharides. NB-DNJ inhibits glucosidase I and prevents maturation of the sugars.

5

Preferably, the underglycosylated ACE protein is prepared by culturing host cells in the presence of N-butyldeoxynojirimycin (NB-DNJ).

Preferably, underglycosylated ACE protein is prepared using site-directed mutagenesis. More preferably, the underglycosylated ACE protein comprises a mutation at amino acid 337 of SEQ ID No. 2 or amino acids 90, 109, 155, 337 and 586 of SEQ ID No. 2.

Underglycosylated mutants may yield crystals in the orthorhombic, $P2_12_12_1$ space group that diffract to 2.8Å or less. Moreover, crystals from a truncated mutant of tACE that only have simple high mannose oligosaccharides are also grown in the orthorhombic space group $P2_12_12_1$ which may diffract to better than 2.0 Å resolution.

PREPARING A CRYSTAL OF ACE PROTEIN

20

In another aspect, the present invention relates to a method of preparing a crystal of ACE protein, comprising the steps of (a) culturing host cells comprising an underglycosylated ACE protein; (b) purifying the underglycosylated ACE protein; and (c) crystallising the underglycosylated ACE protein.

25

Preferably, the ACE protein is underglycosylated by removing one or more glycosylation sites and/or one or more partially glycosylated sites. More preferably, the underglycosylated ACE protein comprises a mutation at amino acid 337 of SEQ ID No 2 or amino acids 90, 109, 155, 337 and 586 of SEQ ID No 2.

30

The ACE protein may be underglycosylated and purified using the methods described herein.

Preferably, the ACE protein is crystallised using about 10 mM HEPES and about 0.1% PMSF with an equal volume of a reservoir solution containing about 15 % PEG 4000, about 50 mM $\text{CH}_3\text{COONa} \cdot 3\text{H}_2\text{O}$ pH 4.7 and about 10 μM $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$.

- 5 Preferably, the ACE protein is crystallised in the presence of an entity, for example, a modulator of ACE.

MODULATORS OF ACE

- 10 The role of ACE in the pathogenesis of hypertension has resulted in a search for modulators (eg. inhibitors) of the enzyme that could act as antihypertensive drugs (eg. US 3,891,616, US 3,947,575, US 4,052,511 and US 4,053,651). Therapeutic vasodepressors - such as Captopril and D-2-methyl-3-mercaptopropanoyl-L-proline - have been synthesised as ACE inhibitors. Numerous synthetic peptide derivatives have
15 also been shown to be ACE inhibitors as disclosed in US 3,832,337.

- Natural substances that inhibit ACE include snake venom and those derived from foodstuffs - such as ACE inhibiting peptides produced by enzymatic hydrolysis of proteins, such as casein or fish meat protein (by Hiroyuki Ukeda, Nippon Nogei Kagaku
20 Kaishi (Journal of Japan Society for Bioscience, Biotechnology, and Agrochemistry, 66(1), 25-29 (1992)).

- ACE inhibiting synthetic substances include captopril (D-2-methyl-3-mercaptopropanoyl-L-proline) which has already been put to practical application as an
25 orally administered vasodepressor.

However, many ACE inhibiting substances exhibit side effects in many cases and special attention needs be exercised in safety aspects.

- 30 The present invention permits the use of molecular design techniques to design, select and synthesise chemical entities and compounds, including ACE modulating compounds, capable of binding to ACE, in whole or in part.

Thus, in a further aspect, the present invention relates to a method of screening for a modulator of ACE wherein the method comprises the use of a crystal of ACE.

Preferably, the method comprises the steps of: (a) providing at least a portion of the structure co-ordinates of Table A or Table B; (b) employing at least a portion of the structure co-ordinates of Table A or Table B to design or select or synthesise a putative modulator of ACE; (c) contacting the putative modulator of ACE with ACE or a mutant, variant, homologue, derivative or fragment thereof in the presence of a substrate; and (d) screening the putative modulator of ACE in an assay for the potential to modulate ACE.

By way of example, the structure co-ordinates may be used to design compounds that bind to the enzyme and may alter the physical properties of the compounds (eg. solubility) or the enzyme itself. This invention may be used to design compounds that act as modulators – such as competitive inhibitors - of ACE by binding to all or a portion of the active site of ACE. Compounds may also be designed that act as non-competitive inhibitors of ACE. These as non-competitive inhibitors may bind to all or a portion of ACE already bound to its substrate and may be more potent and specific than known ACE inhibitors that compete only for the ACE active site. Similarly, non-competitive inhibitors that bind to and inhibit ACE whether or not it is bound to another chemical entity may be designed using the structure co-ordinates of ACE as described herein.

By way of example, it may be found that the COOH-binding active site residue differs between the N and C domain active sites and/or that it may be amenable to the incorporation of a functionality that can covalently modify this residue to produce an irreversible inhibitor design. It has long been assumed that the COOH-binding residue is a positively charged arginine (M. A. Ondetti & D. W. Cushman (1981) in *Biochemical Regulation of Blood Pressure* (R. L. Soffer, ed.), Wiley, New York, 165-204), but the ACE-lisinopril X-ray crystal structure described herein, shows that it is a lysine, in the case of the C-domain active site. This may present an opportunity for covalent modification, by, for example, the introduction of an alkyl halide or halo-ketone functionality into the inhibitors that can alkylate the lysine amine, or α -ketone

or aldehyde that can form a Schiff's base with the lysine amine, or the use of activated ester or thioester groups, or other modified carboxyl groups susceptible to nucleophilic attack.

- 5 In a preferred embodiment, at least a portion of the structure co-ordinates of Table A or Table B and/or the putative modulator of ACE and/or the substrate are provided on a machine-readable data storage medium comprising a data storage material encoded with machine readable data.
- 10 An ACE crystal may be probed with a variety of different chemical entities or test compounds to determine optimal sites for interaction between modulators of ACE and the enzyme. For example, X-ray diffraction data collected from crystals grown in the presence of chemical entities or test compounds may allow the elucidation of how the chemical entities or test compounds interact with ACE. Molecules that bind to those
- 15 sites can then be designed and synthesised and tested for their ACE modulating activity.

The present invention may also allow the development of compounds that can isomerise to reaction intermediates in the chemical reaction of a substrate or other

20 compound that binds to ACE. Thus, the time-dependent analysis of structural changes in ACE during its interaction with other molecules may be performed. The reaction intermediates of ACE may also be deduced from the reaction product in co-complex with ACE. Such information is especially useful to design improved analogues of known ACE modulators or to design new ACE modulators based on the

25 reaction intermediates of the ACE enzyme and ACE-modulator complex. This may provide a new route for designing ACE modulators with high specificity and stability. Preferably, this provides a new route for designing ACE modulators with high specificity, high stability and low toxicity.

- 30 Small molecule databases or test compounds may be screened for chemical entities or compounds that can bind in whole, or in part, to ACE. Thus, in a preferred embodiment, the putative ACE modulator is from a library of compounds or a database. In this screening, the quality of fit of such entities or compounds to the

binding site may be judged by various methods – such as shape complementarity or estimated interaction energy (Meng, E. C. *et al.*, *J. Comp. Chem.*, 13, pp. 505-524 (1992)).

- 5 Because ACE protein or a mutant, variant, homologue, derivative or fragment thereof may crystallise in more than one crystal form, the structure co-ordinates of ACE, or portions thereof, may be particularly useful to solve the structure of other crystal forms of ACE. They may also be used to solve the structure of ACE mutants, ACE variants, ACE homologues, ACE derivatives, ACE fragments and ACE complexes.

10

- Preferably, the structure co-ordinates of ACE are used to solve the structure of the crystalline form of any other protein with significant amino acid sequence homology to any functional domain of ACE. By way of example, molecular replacement may be used. In this method, the unknown crystal structure, whether it is another crystal
- 15 form of ACE, an ACE mutant, an ACE variant, an ACE homologue (eg. another protein with significant amino acid sequence homology to any functional domain of ACE), an ACE derivative, an ACE fragments or an ACE co-complex may be determined using the ACE structure co-ordinates of the present invention. This method will provide a more accurate structural form for the unknown crystal more
- 20 quickly and efficiently than attempting to determine such information *ab initio*.

In a preferred embodiment of the present invention, the ACE crystal further comprises an entity bound to the ACE protein or a portion thereof. For example, ACE may be crystallised in complex with an entity that is an inhibitor of ACE eg. lisinopril.

25

Preferably, the entity is bound to the ACE protein or a portion thereof by contacting one or more residues of the ACE protein selected from: His384, Ala385, Lys542, Tyr551, Tyr554, Glu415 and His544.

- 30 The crystal structures of a series of such complexes may then be solved by molecular replacement or in combination with MAD (Multiwavelength Anomalous Dispersion) and/or MIRAS (Multiple Isomorphous Replacement with Anomalous Scattering) procedures - and compared with that of wild-type ACE. Potential sites for modification within the binding sites of the enzyme may thus be identified. This

information provides an additional tool for determining the most efficient binding interactions, for example, increased hydrophobic interactions, between ACE and a chemical entity or compound.

- 5 The structures and complexes of ACE may be refined using computer software - such as X-PLOR (Meth. Enzymol., vol. 114 & 115, H. W. Wyckoff et al., eds., Academic Press (1985)), MLPHARE (Collaborative computational project Number 4. The CCP4 Suite: Programs for Protein Crystallography (1994) *Acta Crystallogr. D* 50, 760-763) and SHARP [De La Fortelle, E. & Bricogne, G. Maximum-likelihood
10 heavy-atom parameters refinement in the MIR and MAD methods (1997) *Methods Enzymol.* 276, 472-494). Preferably, the complexes are refined using the program CNS (Brünger *et al.* (1998) *Acta Crystallogr. D* 54, 905-921). During the final stages of refinement water molecules, ions and inhibitor molecules may be inserted in the structure. This information may thus be used to optimise known classes of ACE
15 modulators, eg. ACE inhibitors, and more importantly, to design and synthesise novel classes of ACE modulators.

- The overall figure of merit may be improved by iterative solvent flattening, phase combination and phase extension with the program SOLOMON [Abrahams, J. P. &
20 Leslie, A. G. W. Methods used in structure determination of bovine mitochondrial F1 ATPase. (1996) *Acta Crystallogr. D* 52, 110-119].

- The structure co-ordinates of ACE mutants provided in this invention also facilitate the identification of related proteins or enzymes analogous to ACE in function,
25 structure or both, thereby further leading to novel therapeutic modes for treating or preventing ACE related diseases.

- The design of compounds that bind to or modulate ACE according to the present invention generally involves consideration of two factors. First, the compound must
30 be capable of physically and structurally associating with ACE. Non-covalent molecular interactions important in the association of ACE with its substrate may include hydrogen bonding, van der Waals and hydrophobic interactions. Second, the compound must be able to assume a conformation that allows it to associate with ACE. Although certain portions of the compound may not directly participate in the

association with ACE, those portions may still influence the overall conformation of the molecule. This may have a significant impact on potency. Such conformational requirements include the overall three-dimensional structure and orientation of the chemical entity or compound in relation to all or a portion of a binding site of ACE, or
5 the spacing between functional groups of a compound comprising several chemical entities that directly interact with ACE.

The potential modulating or binding effect of a chemical compound on ACE may be analysed prior to its actual synthesis and testing by the use of computer modelling
10 techniques. If the theoretical structure of the given compound suggests insufficient interaction and association with ACE, then synthesis and testing of the compound may be obviated. However, if computer modelling indicates a strong interaction, the molecule may be synthesised and tested for its ability to bind to ACE and modulate (eg. inhibit) using the fluorescent substrate assay of Thornberry *et al.* (2000) *Methods*
15 *Enzymol.* 322, pp 100-110. In this manner, synthesis of inactive compounds may be avoided.

A modulating or other binding compound of ACE may be computationally evaluated and designed by means of a series of steps in which chemical entities or test
20 compounds are screened and selected for their ability to associate ACE.

A person skilled in the art may use one of several methods to screen chemical entities or test compounds for their ability to associate with ACE and more particularly with the individual binding sites of ACE. This process may begin by visual inspection of,
25 for example, the active site on the computer screen based on the ACE co-ordinates of the present invention. Selected chemical entities or test compounds may then be positioned in a variety of orientations, or docked, with ACE. Docking may be accomplished using software such as Quanta and Sybyl, followed by energy minimisation and molecular dynamics with standard molecular mechanics force fields
30 - such as CHARMM and AMBER.

Specialised computer programs may also assist in the process of selecting chemical entities or test compounds. These include but are not limited to MCSS (Miranker and Karplus (1991) *Proteins: Structure, Function and Genetics*, 11, pp. 29-34); GRID

(Goodford (1985) *J. Med. Chem.*, 28, pp. 849-857) and AUTODOCK (Goodsell and Olsen (1990), *Proteins: Structure. Function, and Genetics*, 8, pp. 195-202).

Once suitable chemical entities or test compounds have been selected, they may be assembled into a single compound – such as an ACE modulator. Assembly may proceed by visual inspection of the relationship of the chemical entities or test compounds in relation to the structure co-ordinates of ACE. This may be followed by manual model building using software - such as Quanta, Sybyl or O [Jones, T. A., Zou, J. Y., Cowan, S. W. & Kjeldgaard, M. Improved methods for building protein models in electron density maps and the location of errors in these models (1991) *Acta Crystallogr. A* 47, 110-119].

Refinement of the model may be carried out using the program CNS [Brünger, A. T. et al. *Crystallography & NMR System: A new software suite for macromolecular structure determination*. (1998) *Acta Crystallogr. D* 54, 905-921].

Various programs may be used by a skilled person to connect the individual chemical entities or test compounds – such as 3D Database systems (Martin (1992) *J. Med. Chem.*, 35, pp. 2145-2154) and CAVEAT (Bartlett *et al.* (1989) *Royal Chem. Soc.* 78, pp. 182-196).

Rather than build an ACE inhibitor one chemical entity at a time, modulating or other ACE binding compounds may be designed as a whole or *de novo* using either an empty binding site or optionally including some portion(s) of a known inhibitor(s). Such compounds may be designed using programs that may include but are not limited to LEGEND (Nishibata and Itai (1991) *Tetrahedron*, 47, p. 8985) and LUDI (Bohm (1992) *J. Comp. Aid. Molec. Design*, 6, pp. 61-78).

Other molecular modelling techniques may also be employed in accordance with this invention – such as those described by Cohen et al., *J. Med. Chem.*, 33, pp. 883-894 (1990); Navia and Murcko (1992) *Current Opinions in Structural Biology*, 2, pp. 202-210 (1992).

Once a compound has been designed or selected by the above methods, the efficiency with which that compound may bind to ACE may be computationally evaluated. Specific computer software may be used to evaluate the efficiency of binding (eg. to evaluate compound deformation energy and electrostatic interaction) – such as

5 QUANTA/CHARMM (Accelrys Inc., USA) and Insight II/Discover (Biosym Technologies Inc., San Diego, Calif., USA). These programs may be implemented, for instance, using a suitable workstation. Other hardware systems and software packages will be known to those persons skilled in the art.

10 Once an ACE-modulating compound has been selected or designed, as described above, substitutions may be made (eg. in atoms or side groups) to improve or modify the binding properties. The substitutions may be conservative ie. the replacement group may have approximately the same size, shape, hydrophobicity and charge as the original group. Such substituted chemical compounds may then be analysed for

15 efficiency of binding to ACE by the same computer methods described above.

Test compounds and modulators of ACE etc. which are identified using the crystal and the methods of the present invention may be screened in assays. Screening can be, for example *in vitro*, in cell culture, and/or *in vivo*. Biological screening assays

20 preferably centre on activity-based response models, binding assays (which measure how well a compound binds), and bacterial, yeast and animal cell lines (which measure the biological effect of a compound in a cell). The assays can be automated for high capacity-high throughput screening (HTS) in which large numbers of compounds can be tested to identify compounds with the desired activity.

25

Current screening technologies are described in Handbook of Drug Screening, edited by Ramakrishna Seethala, Prabhavathi B. Fernandes. New York, NY, Marcel Dekker, (2001).

30 ACE RELATED DISORDERS

ACE related disorders include, but are not limited to, treatment of high blood pressure; treatment of heart failure; prolonging survival of patients who have had a heart attack; preventing death by heart attack and stroke in patients with vascular disease and in

diabetics with other vascular risk factors; prolonging survival of patients with weak heart muscle; helping leaking heart valves; preserving kidney function in diabetics; and the treatment of new indications (e.g. polycythemia). Special groups of patients may also be treated with ACE inhibitors, including: patients with chronic pulmonary disease; patients
5 with scleroderma; patients with atherosclerosis; and patients with hyperuricemia.

ACE CONSTRUCTS

The ACE proteins produced by a host recombinant cell may be secreted or may be
10 contained intracellularly depending on the nucleotide sequence and/or the vector used.

As will be understood by those of skill in the art, expression vectors containing an ACE encoding nucleotide sequence or a mutant, variant, homologue, derivative or fragment thereof, may be designed with signal sequences which direct secretion of the ACE
15 coding sequences through a particular prokaryotic or eukaryotic cell membrane.

The ACE encoding sequence may be fused (eg. ligated) to nucleotide sequences encoding a polypeptide domain which will facilitate purification of soluble proteins (Kroll *DJ et al* (1993) *DNA Cell Biol* 12:441-53). Preferably, the polypeptide domain
20 which facilitates purification of soluble proteins is fused in frame with the ACE encoding sequence. Such purification facilitating domains include, but are not limited to, metal chelating peptides – such as histidine-tryptophan modules that allow purification on immobilised metals (Porath J (1992) *Protein Expr Purif* 3, 263-281), protein A domains that allow purification on immobilised immunoglobulin, and the
25 domain utilised in the FLAGS extension/affinity purification system (Immunex Corp, Seattle, WA). The inclusion of a cleavable linker sequence such as Factor XA or enterokinase (Invitrogen, San Diego, CA) between the purification domain and ACE is useful to facilitate purification.

30 Preferably, the ACE construct is pEE-ACE Δ NI which encodes human tACE that lacks the heavily O-glycosylated, 36-residue N-terminal sequence and is truncated after Ser625, thereby lacking most of the juxtamembrane stalk as well as the transmembrane and cytoplasmic domains as described in (7a).

In another preferred embodiment, the ACE construct comprises an underglycosylated ACE, constructed by the removal of one or more glycosylation sites – such as one or more *N*-linked glycosylation sites. Glycosylation may be abolished using various methods known to a person skilled in the art as previously described. Preferably, a truncated form of tACE (tACE Δ 36 lacking the first N-terminal 36 residues as well as the cytoplasmic domain is used for the construction of mutants (7a) and mutagenic oligonucleotides then used for altering the sites that are glycosylated. Preferably, the nucleotide sequence of each fragment is confirmed by DNA sequencing to ensure that only the desired mutation is created.

Preferably, the ACE construct comprising underglycosylated ACE is pLEN-tACE Δ 36g(1, 2, 3, 4) or is pLEN-tACE Δ 36g(1, 3).

15 HOST CELLS

As used herein, the term “host cell” refers to any cell that comprises nucleotide sequences that are of use in the present invention, for example, nucleotide sequences encoding ACE.

20

Host cells may be transformed or transfected with a nucleotide sequence contained in a vector e.g. a cloning vector. Preferably, said nucleotide sequence is carried in a vector for the replication and/or expression of the nucleotide sequence. The cells will be chosen to be compatible with the said vector and may for example be prokaryotic (for example bacterial), fungal, yeast or plant cells.

The gram-negative bacterium *E. coli* is widely used as a host for cloning nucleotide sequences. This organism is also widely used for heterologous nucleotide sequence expression. However, large amounts of heterologous protein tend to accumulate inside the cell. Subsequent purification of the desired protein from the bulk of *E. coli* intracellular proteins can sometimes be difficult.

In contrast to *E. coli*, bacteria from the genus *Bacillus* are very suitable as heterologous hosts because of their capability to secrete proteins into the culture medium. Other bacteria suitable as hosts are those from the genera *Streptomyces* and *Pseudomonas*.

5

Depending on the nature of the polynucleotide and/or the desirability for further processing of the expressed protein, eukaryotic hosts including yeasts or other fungi may be preferred. In general, yeast cells are preferred over fungal cells because yeast cells are easier to manipulate. However, some proteins are either poorly secreted
10 from the yeast cell, or in some cases are not processed properly (e.g. hyperglycosylation in yeast). In these instances, a different fungal host organism should be selected.

15

Examples of expression hosts are fungi - such as *Aspergillus* species (such as those described in EP-A-0184438 and EP-A-0284603) and *Trichoderma* species; bacteria -
such as *Bacillus* species (such as those described in EP-A-0134048 and EP-A-0253455), *Streptomyces* species and *Pseudomonas* species; yeasts - such as *Kluyveromyces* species (such as those described in EP-A-0096430 and EP-A-0301670) and *Saccharomyces* species; and mammalian cells - such as CHO-K1 cells.

20

The use of host cells may provide for post-translational modifications (eg. glycosylation) as may be needed to confer optimal biological activity on recombinant expression products of the present invention.

25

Aspects of the present invention also relate to host cells comprising the ACE constructs of the present invention. The ACE constructs may comprise a nucleotide sequence for replication and expression of the sequence. The cells will be chosen to be compatible with the vector and may for example be prokaryotic (for example bacterial), fungal, yeast or plant cells.

30

In a preferred embodiment, the host cells are mammalian cells - such as CHO-K1 cells. CHO-K1 cells expressing ACE may be grown and maintained in accordance with Yu *et al.* (1997).

NUCLEOTIDE SEQUENCES

As used herein, the term "nucleotide sequence" refers to nucleotide sequences, oligonucleotide sequences, polynucleotide sequences and variants, homologues,
5 fragments and derivatives thereof (such as portions thereof) which comprise the nucleotide sequences encoding ACE, for example, testis ACE or somatic ACE.

The nucleotide sequence may be DNA or RNA of genomic or synthetic or recombinant origin, which may be double-stranded or single-stranded whether
10 representing the sense or antisense strand or combinations thereof.

Preferably, the term nucleotide sequence is prepared by use of recombinant DNA techniques (e.g. recombinant DNA). The nucleotide sequences may include within them synthetic or modified nucleotides. A number of different types of modification
15 to oligonucleotides are known in the art. These include methylphosphonate and phosphorothioate backbones, addition of acridine or polylysine chains at the 3' and/or 5' ends of the molecule. For the purposes of the present invention, it is to be understood that the nucleotide sequences described herein may be modified by any method available in the art.

20

It will be understood by a skilled person that numerous different nucleotide sequences can encode the same protein as a result of the degeneracy of the genetic code. In addition, it is to be understood that skilled persons may, using routine techniques, make nucleotide substitutions that do not substantially affect the activity encoded by the
25 nucleotide sequence of the present invention to reflect the codon usage of any particular host organism in which the target is to be expressed. Thus, the terms "variant", "homologue" or "derivative" in relation to nucleotide sequences include any substitution of, variation of, modification of, replacement of, deletion of or addition of one (or more) nucleic acids from or to the sequence providing the resultant nucleotide sequence
30 encodes a functional protein according to the present invention (or even a modulator of ACE according to the present invention if said modulator comprises a nucleotide sequence or an amino acid sequence).

AMINO ACID SEQUENCES

As used herein, the term "amino acid sequence" is synonymous with the term "polypeptide" and/or the term "protein". In some instances, the term "amino acid
5 sequence" is synonymous with the term "peptide". In some instances, the term "amino acid sequence" is synonymous with the term "protein".

Aspects of the present invention concern the use of amino acid sequences, which may be available in databases. These amino acid sequences may comprise ACE proteins.

10

The amino acid sequence may be isolated from a suitable source, or it may be made synthetically or it may be prepared by use of recombinant DNA techniques.

Preferably, ACE comprises SEQ ID No. 1 or SEQ ID No. 2, or a mutant, variant,
15 homologue, derivative or fragment thereof. More preferably, ACE comprises SEQ ID No. 2, or a mutant, variant, homologue, derivative or fragment thereof.

PURITY

20 Preferably the protein solution used for crystallisation is at least 97.5% pure. More preferably, the protein solution used for crystallisation is at least 99.0% pure. Most preferably, the protein solution used for crystallisation is at least 99.5% pure.

MODEL

25

As used herein, the term "model" refers to a structural model such as a three dimensional (3D) structural model (or representation thereof) comprising ACE.

Test compounds can be modelled that bind spatially and preferentially to ACE – such
30 as to bind spatially and preferentially to ACE – for example, the active site of ACE.

Preferably, the crystal model comprising ACE is built from all or a portion of the structure co-ordinates presented in Table A or Table B.

MUTANT

As used herein, the term "mutant" refers to ACE comprising any one or more changes in the wild-type ACE sequence shown as SEQ ID No. 1 or one or more changes in the native ACE sequence shown as SEQ ID No. 2.

The term "mutant" is not limited to any of the mutations described herein which are reflected in amino acid substitutions of the amino acid residues in ACE, but may also include, but are not limited to, other deletions or insertions of nucleotides which may result in changes in the amino acid residues in the amino acid sequence of ACE.

In a preferred embodiment, mutations are located at amino acids 337 of SEQ ID No. 2 or amino acids 90, 109, 155, 337 and 586 of SEQ ID No. 2.

The present invention also enables the solving of the crystal structure of ACE mutants. More particularly, by virtue of the present invention, the location of the active site of ACE based on its crystal structure permits the identification of desirable sites for mutation. For example, one or more mutations may be directed to a particular site - such as the active site - or combination of sites of ACE. Similarly, only a location on, at or near the enzyme surface may be replaced, resulting in an altered surface charge of one or more charge units, as compared to the wild-type enzyme. Alternatively, an amino acid residue in ACE may be chosen for replacement based on its hydrophilic or hydrophobic characteristics.

Such mutants may be characterised by any one of several different properties as compared with wild-type ACE. For example, such mutants may have altered surface charge of one or more charge units, or have an increased stability to subunit dissociation, or an altered substrate specificity in comparison with, or a higher specific activity than, wild-type ACE.

The mutants may be prepared in a number of ways that are known by a person skilled in the art. For example, mutations may be introduced by means of oligonucleotide-directed mutagenesis or other conventional methods. Alternatively, mutants of ACE

may be generated by site specific replacement of a particular amino acid with an unnaturally occurring amino acid. This may be achieved by growing a host organism capable of expressing either the wild-type or mutant polypeptide on a growth medium depleted of one or more natural amino acids but enriched in one or more
5 corresponding unnaturally occurring amino acids.

The expression, activity (eg. kinetic constants) and/or the crystallisation properties of the mutants may be determined using the methods described herein.

10 VARIANTS/HOMOLOGUES/DERIVATIVES/FRAGMENTS

The ACE described herein is intended to include any polypeptide, which has the activity of the naturally occurring ACE and includes all vertebrate and mammalian forms. Such terms also include polypeptides that differ from naturally occurring
15 forms of ACE by having amino acid deletions, substitutions, and additions, but which retain the activity of ACE.

The term "variant" is used to mean a naturally occurring polypeptide or nucleotide sequences which differs from a wild-type or a native sequence.

20

The term "fragment" indicates that a polypeptide or nucleotide sequence comprises a fraction of a wild-type or a native sequence. It may comprise one or more large contiguous sections of sequence or a plurality of small sections. The sequence may also comprise other elements of sequence, for example, it may be a fusion protein with
25 another protein. Preferably the sequence comprises at least 50%, more preferably at least 65%, more preferably at least 80%, most preferably at least 90% of the wild-type sequence.

The present invention also encompasses the use of variants, homologues and derivatives
30 of nucleotide and amino acid sequences. Here, the term "homologue" means an entity having a certain homology with amino acid sequences or nucleotide sequences. Here, the term "homology" can be equated with "identity".

In the present context, an homologous sequence is taken to include an amino acid sequence which may be at least 75, 85 or 90% identical, preferably at least 95 or 98% identical to the subject sequence – such as ACE or a functional domain thereof.

- 5 Although homology can also be considered in terms of similarity (i.e. amino acid residues having similar chemical properties/functions), it is preferred to express homology in terms of sequence identity.

A significantly homologous amino acid sequence is taken to include an amino acid
10 sequence which may be at least 75, 85 or 90% identical, preferably at least 95 or 98% identical to the subject sequence – such as ACE or a functional domain thereof.

An homologous sequence is taken to include a nucleotide sequence which may be at least 75, 85 or 90% identical, preferably at least 95 or 98% identical to the subject
15 sequence – such as ACE or a functional domain thereof.

Homology comparisons can be conducted by eye, or more usually, with the aid of readily available sequence comparison programs. These commercially available computer programs can calculate % homology between two or more sequences.

20

% homology may be calculated over contiguous sequences, i.e. one sequence is aligned with the other sequence and each amino acid in one sequence is directly compared with the corresponding amino acid in the other sequence, one residue at a time. This is called an “ungapped” alignment. Typically, such ungapped alignments
25 are performed only over a relatively short number of residues.

Although this is a very simple and consistent method, it fails to take into consideration that, for example, in an otherwise identical pair of sequences, one insertion or deletion will cause the following amino acid residues to be put out of
30 alignment, thus potentially resulting in a large reduction in % homology when a global alignment is performed. Consequently, most sequence comparison methods are designed to produce optimal alignments that take into consideration possible insertions and deletions without penalising unduly the overall homology score. This

is achieved by inserting "gaps" in the sequence alignment to try to maximise local homology.

However, these more complex methods assign "gap penalties" to each gap that occurs in the alignment so that, for the same number of identical amino acids, a sequence alignment with as few gaps as possible - reflecting higher relatedness between the two compared sequences - will achieve a higher score than one with many gaps. "Affine gap costs" are typically used that charge a relatively high cost for the existence of a gap and a smaller penalty for each subsequent residue in the gap. This is the most commonly used gap scoring system. High gap penalties will of course produce optimised alignments with fewer gaps. Most alignment programs allow the gap penalties to be modified. However, it is preferred to use the default values when using such software for sequence comparisons. For example when using the GCG Wisconsin Bestfit package the default gap penalty for amino acid sequences is -12 for a gap and -4 for each extension.

Calculation of maximum % homology therefore firstly requires the production of an optimal alignment, taking into consideration gap penalties. A suitable computer program for carrying out such an alignment is the GCG Wisconsin Bestfit package (University of Wisconsin, U.S.A.; Devereux *et al.*, 1984, *Nucleic Acids Research* 12:387). Examples of other software than can perform sequence comparisons include, but are not limited to, the BLAST package (see Ausubel *et al.*, 1999 *ibid* - Chapter 18), FASTA (Atschul *et al.*, 1990, *J. Mol. Biol.*, 403-410) and the GENWORKS suite of comparison tools. Both BLAST and FASTA are available for offline and online searching (see Ausubel *et al.*, 1999 *ibid*, pages 7-58 to 7-60). However, for some applications, it is preferred to use the GCG Bestfit program. A new tool, called BLAST 2 Sequences is also available for comparing protein and nucleotide sequence (see *FEMS Microbiol Lett* 1999 174(2): 247-50; *FEMS Microbiol Lett* 1999 177(1): 187-8)

Although the final % homology can be measured in terms of identity, the alignment process itself is typically not based on an all-or-nothing pair comparison. Instead, a scaled similarity score matrix is generally used that assigns scores to each pairwise comparison based on chemical similarity or evolutionary distance. An example of

such a matrix commonly used is the BLOSUM62 matrix - the default matrix for the BLAST suite of programs. GCG Wisconsin programs generally use either the public default values or a custom symbol comparison table if supplied (see user manual for further details). For some applications, it is preferred to use the public default values
5 for the GCG package, or in the case of other software, the default matrix, such as BLOSUM62.

Once the software has produced an optimal alignment, it is possible to calculate % homology, preferably % sequence identity. The software typically does this as part of
10 the sequence comparison and generates a numerical result.

By way of example, homologous sequences of ACE include, but are not limited to human ACE_S somatic ACE (accession number: J04144), human ACE_T testis ACE (accession number: M26657), human ACEH/ACE2 (accession numbers: AAF78220;
15 BAB40370; AAF99721), chimp ACE_T (accession number: AF193487_2), rabbit ACE_T mature protein (accession number: P22968), rabbit ACE_T full pre-protein (accession number: P22968), mouse ACE_T testis ACE (accession number: P22967), bovine Cdom ACE_S C-domain, rat Cdom ACE_S C-domain (derived from accession number P47820; starting D616), human Ndom ACE_S N-domain (derived from
20 accession number P12821 (J04144)), chimp Ndom ACE_S N-domain (derived from accession number AF193487_1), rabbit Ndom ACE_S N-domain (derived from P12822), bovine Ndom (Bovine {*Bos taurus*} ACE_S N-domain), mouse Ndom ACE_S N-domain (derived from accession number P09470), rat Ndom ACE_S N-domain (derived from accession number P47820), chick ACE (partial ACE accession number
25 Q10751), dros AnCE (derived from accession number Q10714), dros ACE_r (derived from accession number X96913), buffalo fly ACE (derived from accession number Q10715), and silkworm ACE (derived from accession number BAA97657), tick ACE (derived from accession number U62809).

30 The sequences may also have deletions, insertions or substitutions of amino acid residues, which produce a silent change and result in a functionally equivalent substance. Deliberate amino acid substitutions may be made on the basis of similarity in polarity, charge, solubility, hydrophobicity, hydrophilicity, and/or the amphipathic nature of the residues as long as the secondary binding activity of the substance is

retained. For example, negatively charged amino acids include aspartic acid and glutamic acid; positively charged amino acids include lysine and arginine; and amino acids with uncharged polar head groups having similar hydrophilicity values include leucine, isoleucine, valine, glycine, alanine, asparagine, glutamine, serine, threonine, phenylalanine, and tyrosine.

Conservative substitutions may be made, for example according to the Table below. Amino acids in the same block in the second column and preferably in the same line in the third column may be substituted for each other:

10

ALIPHATIC	Non-polar	G A P
		I L V
	Polar - uncharged	C S T M
		N Q
	Polar - charged	D E
		K R
AROMATIC		H F W Y

Homologous substitution (substitution and replacement are both used herein to mean the interchange of an existing amino acid residue, with an alternative residue) may occur i.e. like-for-like substitution such as basic for basic, acidic for acidic, polar for polar etc. Non-homologous substitution may also occur i.e. from one class of residue to another or alternatively involving the inclusion of unnatural amino acids such as ornithine (hereinafter referred to as Z), diaminobutyric acid ornithine (hereinafter referred to as B), norleucine ornithine (hereinafter referred to as O), pyriylalanine, thienylalanine, naphthylalanine and phenylglycine.

20

Replacements may also be made by unnatural amino acids include; alpha* and alpha-disubstituted* amino acids, N-alkyl amino acids*, lactic acid*, halide derivatives of natural amino acids such as trifluorotyrosine*, p-Cl-phenylalanine*, p-Br-phenylalanine*, p-I-phenylalanine*, L-allyl-glycine*, β -alanine*, L- α -amino butyric acid*, L- γ -amino butyric acid*, L- α -amino isobutyric acid*, L- ϵ -amino caproic acid*, 7-amino heptanoic acid*, L-methionine sulfone*, L-norleucine*, L-norvaline*, p-nitro-L-

25

- phenylalanine*, L-hydroxyproline[#], L-thioprolin*, methyl derivatives of phenylalanine (Phe) such as 4-methyl-Phe*, pentamethyl-Phe*, L-Phe (4-amino)[#], L-Tyr (methyl)*, L-Phe (4-isopropyl)*, L-Tic (1,2,3,4-tetrahydroisoquinoline-3-carboxyl acid)*, L-diaminopropionic acid[#] and L-Phe (4-benzyl)*. The notation * has been utilised for the purpose of the discussion above (relating to homologous or non-homologous substitution), to indicate the hydrophobic nature of the derivative whereas # has been utilised to indicate the hydrophilic nature of the derivative, #* indicates amphipathic characteristics.
- 10 The term "derivative" or "derivatised" as used herein includes chemical modification of an entity – such as test compound or an ACE modulator. Illustrative of such chemical modifications would be replacement of hydrogen by a halo group, an alkyl group, an acyl group or an amino group.
- 15 Variant amino acid sequences may include suitable spacer groups that may be inserted between any two amino acid residues of the sequence including alkyl groups such as methyl, ethyl or propyl groups in addition to amino acid spacers such as glycine or β -alanine residues. A further form of variation, involves the presence of one or more amino acid residues in peptoid form, will be well understood by those skilled in the art. For the avoidance of doubt, "the peptoid form" is used to refer to variant amino acid residues wherein the α -carbon substituent group is on the residue's nitrogen atom rather than the α -carbon. Processes for preparing peptides in the peptoid form are known in the art, for example Simon RJ et al., PNAS (1992) 89(20), 9367-9371 and Horwell DC, Trends Biotechnol. (1995) 13(4), 132-134.

25

TEST COMPOUNDS

- As used herein, the term "test compound" includes, but is not limited to, a compound which may be obtainable from or produced by any suitable source, whether natural or not.
- 30

The test compound may be designed or obtained from a library of compounds, which may comprise peptides, as well as other compounds, such as small organic molecules

and particularly new lead compounds. By way of example, the test compound may be a natural substance, a biological macromolecule, or an extract made from biological materials - such as bacteria, fungi, or animal (particularly mammalian) cells or tissues, an organic or an inorganic molecule, a synthetic test compound, a semi-synthetic test compound, a structural or functional mimetic, a peptide, a peptidomimetics, a derivatised test compound, a peptide cleaved from a whole protein, or a peptide synthesised synthetically (such as, by way of example, either using a peptide synthesiser or by recombinant techniques or combinations thereof, a recombinant test compound, a natural or a non-natural test compound, a fusion protein or equivalent thereof and mutants, derivatives or combinations thereof. The test compound may even be a compound that is a modulator of ACE – such as a known inhibitor of ACE - that has been modified in some way eg. by recombinant DNA techniques or chemical synthesis techniques.

Typically, the test compound will be prepared by recombinant DNA techniques and/or chemical synthesis techniques.

Once a test compound capable of interacting ACE has been identified, further steps may be carried out to select and/or to modify the test compounds and/or to modify existing compounds, such that they are able to modulate ACE.

MODULATING ACE

As herein, the term “modulating” refers to preventing, suppressing, inhibiting, alleviating, restoring, elevating, increasing or otherwise affecting ACE.

The term “ACE modulator” may refer to a single entity or a combination of entities.

The ACE modulator may be an antagonist or an agonist of ACE.

30

As used herein, the term “agonist” means any entity, which is capable of interacting (eg. binding) with ACE and which is capable of increasing a proportion of the ACE that is in an active form, resulting in an increased biological response.

As used herein, the term "antagonist" means any entity, which is capable of interacting (eg. binding) with ACE and which is capable of decreasing (eg. inhibiting) a proportion of the ACE that is in an active form, resulting in a decreased biological response.

5

Preferably, the ACE modulators of the present invention are antagonists of ACE.

The modulator of ACE may be an organic compound or other chemical. The modulator of ACE may be a compound, which is obtainable from or produced by any
10 suitable source, whether natural or artificial. The modulator of ACE may be an amino acid molecule, a polypeptide, or a chemical derivative thereof, or a combination thereof. The modulator of ACE may even be a polynucleotide molecule - which may be a sense or an anti-sense molecule. The modulator of ACE may even be an antibody.

15

The modulator of ACE may be designed or obtained from a library of compounds, which may comprise peptides, as well as other compounds, such as small organic molecules.

20 By way of example, the modulator of ACE may be a natural substance, a biological macromolecule, or an extract made from biological materials such as bacteria, fungi, or animal (particularly mammalian) cells or tissues, an organic or an inorganic molecule, a synthetic agent, a semi-synthetic agent, a structural or functional mimetic, a peptide, a peptidomimetic, a derivatised agent, a peptide cleaved from a whole
25 protein, or a peptide synthesised synthetically (such as, by way of example, either using a peptide synthesiser or by recombinant techniques or combinations thereof, a recombinant agent, an antibody, a natural or a non-natural agent, a fusion protein or equivalent thereof and mutants, derivatives or combinations thereof).

30 Typically, the modulator of ACE will be an organic compound. Typically, the organic compounds will comprise two or more hydrocarbyl groups. Here, the term "hydrocarbyl group" means a group comprising at least C and H and may optionally comprise one or more other suitable substituents. Examples of such substituents may include halo-, alkoxy-, nitro-, an alkyl group, a cyclic group etc. In addition to the

possibility of the substituents being a cyclic group, a combination of substituents may form a cyclic group. If the hydrocarbonyl group comprises more than one C then those carbons need not necessarily be linked to each other. For example, at least two of the carbons may be linked *via* a suitable element or group. Thus, the hydrocarbonyl group may contain hetero atoms. Suitable hetero atoms will be apparent to those skilled in the art and include, for instance, sulphur, nitrogen and oxygen. For some applications, preferably the modulator of ACE comprises at least one cyclic group. The cyclic group may be a polycyclic group, such as a non-fused polycyclic group. For some applications, the modulator of ACE comprises at least the one of said cyclic groups linked to another hydrocarbonyl group.

The modulator of ACE may contain halo groups, for example, fluoro, chloro, bromo or iodo groups.

The modulator of ACE may contain one or more of alkyl, alkoxy, alkenyl, alkylene and alkenylene groups – which may be unbranched- or branched-chain.

The modulator of ACE may be in the form of a pharmaceutically acceptable salt – such as an acid addition salt or a base salt – or a solvate thereof, including a hydrate thereof. For a review on suitable salts see Berge *et al*, (1977) *J. Pharm. Sci.* 66, 1-19.

The modulator of ACE may be structurally novel modulators of ACE.

The modulators of ACE may be analogues of known modulators of ACE – such as known inhibitors of ACE (for example, snake venom, peptides produced by enzymatic hydrolysis of casein or fish meat protein, or Benazepril, Captopril, Cilazapril, Enalapril, Fosinopril, Lisinopril, Moexipril, Perindopril, Quinapril, Ramipril, Trandolapril and Enalaprilat).

Preferably, the ACE modulators have improved properties over those previously available, for example, fewer side effects – such as cough (eg. dry, persistent); fever and chills; hoarseness; swelling of face, mouth, hands, or feet; trouble in swallowing or breathing; itching of skin; yellow eyes or skin; dizziness, light-headedness, or fainting; skin rash, with or without itching; fever, or joint pain; abdominal pain, abdominal

distention; nausea, or vomiting; chest pain, confusion; irregular heartbeat; nervousness; numbness or tingling in hands, feet, or lips; weakness or heaviness of legs; headache, diarrhoea; loss of taste; nausea; unusual tiredness.

5 The modulator of ACE may be a mimetic.

The modulator of ACE may also be chemically modified.

The modulator of ACE may be capable of displaying other therapeutic properties.

10

The modulator of ACE may be used in combination with one or more other pharmaceutically active agents.

If combinations of active agents are administered, then they may be administered
15 simultaneously, separately or sequentially.

MIMETIC

As used herein, the term "mimetic" relates to any chemical which includes, but is not
20 limited to, a peptide, polypeptide, antibody or other organic chemical which has the same qualitative activity or effect as a known compound. That is, the mimetic is a functional equivalent of a known compound.

STEREO AND GEOMETRIC ISOMERS

25

Modulators of ACE may exist as stereoisomers and/or geometric isomers – e.g. they may possess one or more asymmetric and/or geometric centres and so may exist in two or more stereoisomeric and/or geometric forms. The present invention contemplates the use of all the individual stereoisomers and geometric isomers, and
30 mixtures thereof.

PHARMACEUTICAL SALT

Modulators of ACE may be administered in the form of a pharmaceutically acceptable salt.

Pharmaceutically-acceptable salts are well known to those skilled in the art, and for example include those mentioned by Berge *et al*, (1977) *J. Pharm. Sci.*, 66, 1-19. Suitable acid addition salts are formed from acids which form non-toxic salts and include the hydrochloride, hydrobromide, hydroiodide, nitrate, sulphate, bisulphate, phosphate, hydrogenphosphate, acetate, trifluoroacetate, gluconate, lactate, salicylate, citrate, tartrate, ascorbate, succinate, maleate, fumarate, gluconate, formate, benzoate, methanesulphonate, ethanesulphonate, benzenesulphonate and p-toluenesulphonate salts.

When one or more acidic moieties are present, suitable pharmaceutically acceptable base addition salts can be formed from bases which form non-toxic salts and include the aluminium, calcium, lithium, magnesium, potassium, sodium, zinc, and pharmaceutically-active amines such as diethanolamine, salts.

A pharmaceutically acceptable salt of a modulator of ACE may be readily prepared by mixing together solutions of the modulator of ACE and the desired acid or base, as appropriate. The salt may precipitate from solution and be collected by filtration or may be recovered by evaporation of the solvent.

The modulator of ACE may exist in polymorphic form.

The modulator of ACE may contain one or more asymmetric carbon atoms and therefore exists in two or more stereoisomeric forms. Where a modulator of ACE contains an alkenyl or alkenylene group, *cis* (E) and *trans* (Z) isomerism may also occur. The present invention includes the individual stereoisomers of the modulator of ACE and, where appropriate, the individual tautomeric forms thereof, together with mixtures thereof.

Separation of diastereoisomers or *cis* and *trans* isomers may be achieved by conventional techniques, e.g. by fractional crystallisation, chromatography or H.P.L.C. of a stereoisomeric mixture of the modulator of ACE or a suitable salt or

derivative thereof. An individual enantiomer of the modulator of ACE may also be prepared from a corresponding optically pure intermediate or by resolution, such as by H.P.L.C. of the corresponding racemate using a suitable chiral support or by fractional crystallisation of the diastereoisomeric salts formed by reaction of the
5 corresponding racemate with a suitable optically active acid or base, as appropriate.

The modulator of ACE may also include all suitable isotopic variations of the modulator of ACE or a pharmaceutically acceptable salt thereof. An isotopic variation of an modulator of ACE or a pharmaceutically acceptable salt thereof is
10 defined as one in which at least one atom is replaced by an atom having the same atomic number but an atomic mass different from the atomic mass usually found in nature. Examples of isotopes that can be incorporated into the modulator of ACE and pharmaceutically acceptable salts thereof include isotopes of hydrogen, carbon, nitrogen, oxygen, phosphorus, sulphur, fluorine and chlorine such as ^2H , ^3H , ^{13}C , ^{14}C ,
15 ^{15}N , ^{17}O , ^{18}O , ^{31}P , ^{32}P , ^{35}S , ^{18}F and ^{36}Cl , respectively. Certain isotopic variations of the modulator of ACE and pharmaceutically acceptable salts thereof, for example, those in which a radioactive isotope such as ^3H or ^{14}C is incorporated, are useful in drug and/or substrate tissue distribution studies. Tritiated, i.e., ^3H , and carbon-14, i.e., ^{14}C , isotopes are particularly preferred for their ease of preparation and detectability.
20 Further, substitution with isotopes such as deuterium, i.e., ^2H , may afford certain therapeutic advantages resulting from greater metabolic stability, for example, increased *in vivo* half-life or reduced dosage requirements and hence may be preferred in some circumstances. Isotopic variations of the modulator of ACE and pharmaceutically acceptable salts thereof of this invention can generally be prepared
25 by conventional procedures using appropriate isotopic variations of suitable reagents.

It will be appreciated by those skilled in the art that the agent may be derived from a prodrug. Examples of prodrugs include entities that have certain protected group(s) and which may not possess pharmacological activity as such, but may, in certain
30 instances, be administered (such as orally or parenterally) and thereafter metabolised in the body to form the modulator of ACE which is pharmacologically active.

It will be further appreciated that certain moieties known as "pro-moieties", for example as described in "Design of Prodrugs" by H. Bundgaard, Elsevier, 1985 (the

disclosed of which is hereby incorporated by reference), may be placed on appropriate functionalities of the modulator of ACE. Such prodrugs are also included within the scope of the invention.

5 PHARMACEUTICALLY ACTIVE SALT

The modulator of ACE may be administered as a pharmaceutically acceptable salt. Typically, a pharmaceutically acceptable salt may be readily prepared by using a desired acid or base, as appropriate. The salt may precipitate from solution and be
10 collected by filtration or may be recovered by evaporation of the solvent.

CHEMICAL SYNTHESIS METHODS

The modulator of ACE of the present invention may be prepared by chemical
15 synthesis techniques.

It will be apparent to those skilled in the art that sensitive functional groups may need to be protected and deprotected during synthesis of a compound of the invention. This may be achieved by conventional techniques, for example as described in "Protective Groups
20 in Organic Synthesis" by T W Greene and P G M Wuts, John Wiley and Sons Inc. (1991), and by P.J.Kocienski, in "Protecting Groups", Georg Thieme Verlag (1994).

It is possible during some of the reactions that any stereocentres present could, under certain conditions, be racemised, for example if a base is used in a reaction with a
25 substrate having an having an optical centre comprising a base-sensitive group. This is possible during e.g. a guanylation step. It should be possible to circumvent potential problems such as this by choice of reaction sequence, conditions, reagents, protection/deprotection regimes, etc. as is well-known in the art.

30 The compounds and salts may be separated and purified by conventional methods.

Separation of diastereomers may be achieved by conventional techniques, e.g. by fractional crystallisation, chromatography or H.P.L.C. of a stereoisomeric mixture of

a compound of formula (I) or a suitable salt or derivative thereof. An individual enantiomer of a compound of formula (I) may also be prepared from a corresponding optically pure intermediate or by resolution, such as by H.P.L.C. of the corresponding racemate using a suitable chiral support or by fractional crystallisation of the diastereomeric salts formed by reaction of the corresponding racemate with a suitably optically active acid or base.

ACE, modulators of ACE or variants, homologues, derivatives, fragments or mimetics thereof may be produced using chemical methods to synthesise the ACE or the modulator of ACE in whole or in part. For example, a ACE peptide or a modulator of ACE that is a peptide can be synthesised by solid phase techniques, cleaved from the resin, and purified by preparative high performance liquid chromatography (e.g., Creighton (1983) *Proteins Structures And Molecular Principles*, WH Freeman and Co, New York NY). The composition of the synthetic peptides may be confirmed by amino acid analysis or sequencing (e.g., the Edman degradation procedure; Creighton, *supra*).

Synthesis of peptides (or variants, homologues, derivatives, fragments or mimetics thereof) may be performed using various solid-phase techniques (Roberge JY *et al* (1995) *Science* 269: 202-204) and automated synthesis may be achieved, for example, using the ABI 431 A Peptide Synthesizer (Perkin Elmer) in accordance with the instructions provided by the manufacturer. Additionally, the amino acid sequences comprising the modulator of ACE, may be altered during direct synthesis and/or combined using chemical methods with a sequence from other subunits, or any part thereof, to produce a variant modulator of ACE.

CHEMICAL MODIFICATION

The modulator of ACE may be a chemically modified modulator of ACE.

30

The chemical modification of a modulator of ACE may either enhance or reduce interactions between the modulator of ACE and the target – such as hydrogen bonding interactions, charge interactions, hydrophobic interactions, van der Waals interactions or dipole interactions.

In one aspect, the modulator of ACE may act as a model (for example, a template) for the development of other compounds.

5 PHARMACEUTICAL COMPOSITIONS

The components may be administered alone but will generally be administered as a pharmaceutical composition – e.g. when the components are in a mixture with a suitable pharmaceutical excipient, diluent or carrier selected with regard to the
10 intended route of administration and standard pharmaceutical practice.

For example, the components can be administered in the form of tablets, capsules, ovules, elixirs, solutions or suspensions, which may contain flavouring or colouring agents, for immediate-, delayed-, modified-, sustained-, pulsed- or controlled-release
15 applications.

If the pharmaceutical is a tablet, then the tablet may contain excipients such as microcrystalline cellulose, lactose, sodium citrate, calcium carbonate, dibasic calcium phosphate and glycine, disintegrants such as starch (preferably corn, potato or tapioca
20 starch), sodium starch glycollate, croscarmellose sodium and certain complex silicates, and granulation binders - such as polyvinylpyrrolidone, hydroxypropylmethylcellulose (HPMC), hydroxypropylcellulose (HPC), sucrose, gelatin and acacia. Additionally, lubricating agents - such as magnesium stearate, stearic acid, glyceryl behenate and talc may be included.

25 Solid compositions of a similar type may also be employed as fillers in gelatin capsules. Preferred excipients in this regard include lactose, starch, a cellulose, milk sugar or high molecular weight polyethylene glycols. For aqueous suspensions and/or elixirs, the modulator of ACE may be combined with various sweetening or
30 flavouring agents, colouring matter or dyes, with emulsifying and/or suspending agents and with diluents such as water, ethanol, propylene glycol and glycerin, and combinations thereof.

The routes for administration (delivery) may include, but are not limited to, one or more of oral (e.g. as a tablet, capsule, or as an ingestible solution), topical, mucosal (e.g. as a nasal spray or aerosol for inhalation), nasal, parenteral (e.g. by an injectable form), gastrointestinal, intraspinal, intraperitoneal, intramuscular, intravenous, 5 intraventricular, intrauterine, intraocular, intradermal, intracranial, intratracheal, intravaginal, intracerebroventricular, intracerebral, subcutaneous, ophthalmic (including intravitreal or intracameral), transdermal, rectal, buccal, vaginal, epidural, sublingual.

10 Pharmaceutical compositions of the present invention may comprise a therapeutically effective amount of ACE, one or more modulators of ACE or combinations thereof.

The pharmaceutical compositions may be for human or animal usage in human and veterinary medicine and will typically comprise any one or more of a 15 pharmaceutically acceptable diluent, carrier, or excipient. Acceptable carriers or diluents for therapeutic use are well known in the pharmaceutical art, and are described, for example, in Remington's Pharmaceutical Sciences, Mack Publishing Co. (A. R. Gennaro edit. 1985). The choice of pharmaceutical carrier, excipient or diluent can be selected with regard to the intended route of administration and 20 standard pharmaceutical practice. The pharmaceutical compositions may comprise as - or in addition to - the carrier, excipient or diluent any suitable binder(s), lubricant(s), suspending agent(s), coating agent(s), solubilising agent(s).

Preservatives, stabilizers, dyes and even flavouring agents may be provided in the 25 pharmaceutical composition. Examples of preservatives include sodium benzoate, sorbic acid and esters of p-hydroxybenzoic acid. Antioxidants and suspending agents may be also used.

There may be different composition/formulation requirements dependent on the 30 different delivery systems. By way of example, the pharmaceutical composition of the present invention may be formulated to be administered using a mini-pump or by a mucosal route, for example, as a nasal spray or aerosol for inhalation or ingestible solution, or parenterally in which the composition is formulated by an injectable form, for delivery, by, for example, an intravenous, intramuscular or subcutaneous route.

Alternatively, the formulation may be designed to be administered by a number of routes.

If the modulator of ACE is to be administered mucosally through the gastrointestinal mucosa, it should be able to remain stable during transit though the gastrointestinal tract; for example, it should be resistant to proteolytic degradation, stable at acid pH and resistant to the detergent effects of bile.

Where appropriate, the pharmaceutical compositions may be administered by inhalation, in the form of a suppository or pessary, topically in the form of a lotion, solution, cream, ointment or dusting powder, by use of a skin patch, orally in the form of tablets containing excipients such as starch or lactose, or in capsules or ovules either alone or in admixture with excipients, or in the form of elixirs, solutions or suspensions containing flavouring or colouring agents, or the pharmaceutical compositions can be injected parenterally, for example intravenously, intramuscularly or subcutaneously. For parenteral administration, the compositions may be best used in the form of a sterile aqueous solution which may contain other substances, for example enough salts or monosaccharides to make the solution isotonic with blood. For buccal or sublingual administration the compositions may be administered in the form of tablets or lozenges which can be formulated in a conventional manner.

The modulators of ACE may be used in combination with a cyclodextrin. Cyclodextrins are known to form inclusion and non-inclusion complexes with drug molecules. Formation of a drug-cyclodextrin complex may modify the solubility, dissolution rate, bioavailability and/or stability property of a drug molecule. Drug-cyclodextrin complexes are generally useful for most dosage forms and administration routes. As an alternative to direct complexation with the drug the cyclodextrin may be used as an auxiliary additive, e.g. as a carrier, diluent or solubiliser. Alpha-, beta- and gamma-cyclodextrins are most commonly used and suitable examples are described in WO-A-91/11172, WO-A-94/02518 and WO-A-98/55148.

If the modulator of ACE is a protein, then said protein may be prepared *in situ* in the subject being treated. In this respect, nucleotide sequences encoding said protein may be delivered by use of non-viral techniques (e.g. by use of liposomes) and/or viral

techniques (e.g. by use of retroviral vectors) such that the said protein is expressed from said nucleotide sequence.

DOSE LEVELS

5

Typically, a physician will determine the actual dosage which will be most suitable for an individual subject. The specific dose level and frequency of dosage for any particular patient may be varied and will depend upon a variety of factors including the activity of the specific compound employed, the metabolic stability and length of
10 action of that compound, the age, body weight, general health, sex, diet, mode and time of administration, rate of excretion, drug combination, the severity of the particular condition, and the individual undergoing therapy.

FORMULATION

15

The component(s) may be formulated into a pharmaceutical composition, such as by mixing with one or more of a suitable carrier, diluent or excipient, by using techniques that are known in the art.

VECTOR

20

Aspects of the present invention relate to a vector comprising a nucleotide sequence – such as a nucleotide sequence encoding ACE or a modulator of ACE - administered to a subject.

25

Preferably, ACE or the modulator of ACE is prepared and/or delivered using a genetic vector.

As it is well known in the art, a vector is a tool that allows or facilitates the transfer of
30 an entity from one environment to another. In accordance with the present invention, and by way of example, some vectors used in recombinant DNA techniques allow entities, such as a segment of DNA (such as a heterologous DNA segment, such as a heterologous cDNA segment), to be transferred into a host and/or a target cell for the purpose of replicating the vectors comprising nucleotide sequences and/or expressing

the proteins encoded by the nucleotide sequences. Examples of vectors used in recombinant DNA techniques include, but are not limited to, plasmids, chromosomes, artificial chromosomes or viruses.

- 5 The term "vector" includes expression vectors and/or transformation vectors.

The term "expression vector" means a construct capable of *in vivo* or *in vitro/ex vivo* expression.

- 10 The term "transformation vector" means a construct capable of being transferred from one species to another.

REGULATORY SEQUENCES

- 15 In some applications, nucleotide sequences are operably linked to a regulatory sequence which is capable of providing for the expression of the nucleotide sequence, such as by a chosen host cell. By way of example, a vector comprising the ACE nucleotide sequence is operably linked to such a regulatory sequence i.e. the vector is an expression vector.

20

The term "operably linked" refers to a juxtaposition wherein the components described are in a relationship permitting them to function in their intended manner. A regulatory sequence "operably linked" to a coding sequence is ligated in such a way that expression of the coding sequence is achieved under conditions compatible with

25 the control sequences.

The term "regulatory sequences" includes promoters and enhancers and other expression regulation signals.

- 30 The term "promoter" is used in the normal sense of the art, e.g. an RNA polymerase binding site.

Enhanced expression of a nucleotide sequence, for example, a nucleotide sequence encoding ACE - may also be achieved by the selection of heterologous regulatory

regions, e.g. promoter, secretion leader and terminator regions, which serve to increase expression and, if desired, secretion levels of the protein of interest from the chosen expression host and/or to provide for the inducible control of the expression of ACE. In eukaryotes, polyadenylation sequences may be operably connected to the
5 ACE nucleotide sequence.

Preferably, the ACE nucleotide sequence is operably linked to at least a promoter.

Aside from the promoter native to the gene encoding the ACE nucleotide sequence,
10 other promoters may be used to direct expression of the ACE polypeptide. The promoter may be selected for its efficiency in directing the expression of the ACE nucleotide sequence in the desired expression host.

In another embodiment, a constitutive promoter may be selected to direct the
15 expression of the ACE nucleotide sequence of the present invention. Such an expression construct may provide additional advantages since it circumvents the need to culture the expression hosts on a medium containing an inducing substrate.

Hybrid promoters may also be used to improve inducible regulation of the expression
20 construct.

The promoter can additionally include features to ensure or to increase expression in a suitable host. For example, the features can be conserved regions such as a Pribnow Box or a TATA box. The promoter may even contain other sequences to affect (such
25 as to maintain, enhance, decrease) the levels of expression of the ACE nucleotide sequence. For example, suitable other sequences include the Sh1-intron or an ADH intron. Other sequences include inducible elements - such as temperature, chemical, light or stress inducible elements. Also, suitable elements to enhance transcription or translation may be present.

30

EXPRESSION VECTOR

Preferably, nucleotide sequences - such as nucleotide sequences encoding ACE or modulators of ACE - are inserted into a vector that is operably linked to a control

sequence that is capable of providing for the expression of the coding sequence by the host cell.

5 Nucleotide sequences produced by a host recombinant cell may be secreted or may be contained intracellularly depending on the sequence and/or the vector used. As will be understood by those of skill in the art, expression vectors can be designed with signal sequences, which direct secretion of the nucleotide sequence through a particular prokaryotic or eukaryotic cell membrane.

10 The expression vector may be pEE-tACE Δ 36NJ which encodes human tACE that lacks the heavily *O*-glycosylated, 36-residue N-terminal sequence and is truncated after Ser⁶²⁵, thereby lacking most of the juxtamembrane stalk as well as the transmembrane and cytoplasmic domains.

15 In a preferred aspect, the expression vector is pLEN- tACE Δ 36g(n), where n is a set of numbers defining the available *N*-linked glycosylation sites.

Preferably, the expression vectors are stably expressed in CHO cells as described previously (Ehlers *et al.* (1996) *Biochemistry* 35, 9549-9559). More preferably, the
20 expression vectors are pLEN- tACE Δ 36g(1, 2, 3, 4) and pLEN- tACE Δ 36g(1,3).

FUSION PROTEINS

ACE or a modulator of ACE may be expressed as a fusion protein to aid extraction
25 and purification and/or delivery of the modulator of ACE or the ACE protein to an individual and/or to facilitate the development of a screen for modulators of ACE.

Examples of fusion protein partners include glutathione-S-transferase (GST), 6xHis, GAL4 (DNA binding and/or transcriptional activation domains) and β -galactosidase.
30

It may also be convenient to include a proteolytic cleavage site between the fusion protein partner and the protein sequence of interest to allow removal of fusion protein

sequences. Preferably, the fusion protein will not hinder the activity of the protein of interest.

5 The fusion protein may comprise an antigen or an antigenic determinant fused to the substance of the present invention. In this embodiment, the fusion protein may be a non-naturally occurring fusion protein comprising a substance, which may act as an adjuvant in the sense of providing a generalised stimulation of the immune system. The antigen or antigenic determinant may be attached to either the amino or carboxy terminus of the substance.

10

ORGANISM

The term "organism" in relation to the present invention includes any organism that could comprise ACE and/or modulators of ACE. Examples of organisms may include
15 mammals, fungi, yeast or plants.

Preferably, the organism is a mammal. More preferably, the organism is a human.

TRANSFORMATION

20

As indicated earlier, the host organism can be a prokaryotic or a eukaryotic organism. Examples of suitable prokaryotic hosts include *E. coli* and *Bacillus subtilis*. Teachings on the transformation of prokaryotic hosts are well documented in the art, for example see Sambrook et al (Molecular Cloning: A Laboratory Manual, 2nd edition, 1989, Cold
25 Spring Harbor Laboratory Press) and Ausubel *et al.*, Current Protocols in Molecular Biology (1995), John Wiley & Sons, Inc. Examples of suitable eukaryotic hosts include mammalian cells.

If a prokaryotic host is used then the nucleotide sequence – such as the ACE nucleotide
30 sequence - may need to be suitably modified before transformation - such as by removal of introns.

Thus, the present invention also relates to the transformation of a host cell with a nucleotide sequence – such as ACE or a modulator of ACE. Host cells transformed.

with the nucleotide sequence may be cultured under conditions suitable for the expression and recovery of the encoded protein from cell culture. The protein produced by a recombinant cell may be secreted or may be contained intracellularly depending on the sequence and/or the vector used. As will be understood by those of skill in the art, expression vectors containing coding sequences can be designed with signal sequences which direct secretion of the coding sequences through a particular prokaryotic or eukaryotic cell membrane. Other recombinant constructions may join the coding sequence to nucleotide sequence encoding a polypeptide domain, which will facilitate purification of soluble proteins (Kroll *DJ et al* (1993) *DNA Cell Biol* 12:441-53) e.g. 6-His or Glutathione-S-transferase.

TRANSFECTION

Vectors comprising for example, the ACE nucleotide sequence, may be introduced into host cells, for example, mammalian cells, using a variety of methods.

Typical transfection methods include electroporation, DNA biolistics, lipid-mediated transfection, compacted DNA-mediated transfection, liposomes, immunoliposomes, lipofectin, cationic agent-mediated, cationic facial amphiphiles (CFAs) (*Nature Biotech.* (1996) 14, 556), multivalent cations such as spermine, cationic lipids or polylysine, 1, 2,-bis (oleoyloxy)-3-(trimethylammonio) propane (DOTAP)-cholesterol complexes (Wolff and Trubetskoy 1998 *Nature Biotechnology* 16: 421) and combinations thereof.

Uptake of nucleic acid constructs by mammalian cells is enhanced by several known transfection techniques for example those including the use of transfection agents. Example of these agents include cationic agents (for example calcium phosphate and DEAE-dextran) and lipofectants (for example lipofectamTM and transfectamTM). Typically, nucleic acid constructs are mixed with the transfection agent to produce a composition.

Such methods are described in many standard laboratory manuals - such as Sambrook *et al.*, *Molecular Cloning: A Laboratory Manual*, 2d ed. (1989) Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y.

GENERAL RECOMBINANT DNA METHODOLOGY TECHNIQUES

The present invention employs, unless otherwise indicated, conventional techniques of chemistry, molecular biology, microbiology, recombinant DNA and immunology, which are within the capabilities of a person of ordinary skill in the art. Such techniques are explained in the literature. See, for example, J. Sambrook, E. F. Fritsch, and T. Maniatis, 1989, *Molecular Cloning: A Laboratory Manual*, Second Edition, Books 1-3, Cold Spring Harbor Laboratory Press; Ausubel, F. M. et al. (1995 and periodic supplements; *Current Protocols in Molecular Biology*, ch. 9, 13, and 16, John Wiley & Sons, New York, N.Y.); B. Roe, J. Crabtree, and A. Kahn, 1996, *DNA Isolation and Sequencing: Essential Techniques*, John Wiley & Sons; J. M. Polak and James O'D. McGee, 1990, *In Situ Hybridization: Principles and Practice*; Oxford University Press; M. J. Gait (Editor), 1984, *Oligonucleotide Synthesis: A Practical Approach*, Irl Press; and, D. M. J. Lilley and J. E. Dahlberg, 1992, *Methods of Enzymology: DNA Structure Part A: Synthesis and Physical Analysis of DNA* Methods in Enzymology, Academic Press. Each of these general texts is herein incorporated by reference.

DESCRIPTION OF THE DRAWINGS

20

Figure 1 is a schematic presentation of wild-type tACE (tACE) and tACE Δ 36 glycosylation mutants. Glycosylation sites are shown with boxes, glycosylated always (black box), glycosylated partially (grey box) and unglycosylated (open box). The O-glycosylated region at the N-terminus of (tACE), which is absent in tACE Δ 36, is shown with a stippled box. TM is the transmembrane domain.

25

Figure 2 illustrates the expression of tACE glycosylation mutants. Proteins are immunodetected from detergent-solubilised cells (A) and from harvested medium (B) with rabbit anti-human tACE antibody (at 1:2000). The estimated protein size is indicated. Lanes contain tACE Δ 36 (Δ 36), untreated CHO cells (CHO) and ACE glycosylation mutants tACE Δ 36-g(n) where n equals the number of sites that are glycosylated.

30

Figures 3 illustrates the effect of tunicamycin on the expression and processing of tACE. CHO cells expressing wild-type tACE are treated with the glycosylation inhibitor tunicamycin for up to 24 h. Cell lysate from untreated (a) and treated (b) cells are analysed at the indicated times by Western blotting, protein molecular weights are given.

Figure 4 illustrates the effect of phorbol ester on the levels of ACE activity. Results are expressed as percentage soluble of total (soluble plus cell associated) ACE activity. Lanes show wild-type tACE (tACE), tACE Δ 36 (Δ 36) and glycosylation mutants tACE Δ 36 g(n), where n gives the number of sites that are glycosylated. CHO cells were grown either in the absence (open bars) or the presence (filled bars) of phorbol 12, 13 -dibutyrate.

Figure 5 represents the orthorhombic crystals of tACE Δ 36.

Figure 6 schematically illustrates a general purpose computer (132) of the type that may be used in accordance with the present invention. The computer (132) includes a central processing unit (134), a read only memory (136), a random access memory (138), a hard disk drive (140), a display driver (142) and display (144) and a user input/output circuit (146) with a keyboard (148) and mouse (150) all connected via a common bus (152). The central processing unit (134) may execute program instructions stored within the ROM (136), the RAM (138) or the hard disk drive (140) to carry out processing of signal values that may be stored within the RAM (138) or the hard disk drive (140). The program may be written in a wide variety of different programming languages. The computer program itself may be stored and distributed on a recording medium, such as a compact disc, or may be downloaded over a network link (not illustrated). The general purpose computer (132) when operating under control of an appropriate computer program effectively forms an apparatus for performing aspects of the present invention.

Figure 7 illustrates the overview of the testis ACE structure. (a) Ribbon diagram of the molecule looking down on the active site. The molecule can be divided into 2 halves as domains I and II shown in cyan and pink respectively. The active site zinc ion and the lisinopril molecule are shown in yellow. The two chloride ions are shown

as black spheres. (b) The molecular surface representation showing the active site groove. (c) The structure-sequence relationship in ACE. The secondary structure elements (domain I-cyan; domain II-pink) follow the same colour code as in (a). The important residues which are involved in binding are marked- zinc ligands (yellow),
5 chloride binding residues (Cl1- light green, Cl2- dark green), lisinopril binding residues (cyan) and glycosylation sites (open boxes).

Figure 8 illustrates details of the active site. (a) Zinc co-ordination in the native structure. Bound zinc ion, acetate ion (AC) and part of the butyl succinate moiety
10 (LIG) are shown. (b) Details of lisinopril (LIS) interactions. Bound zinc ion is also shown.

Figure 9 illustrates the comparison of (a) ACE and (b) Neurolysin folds. The same view as in Figure 7a has been retained.

15

The invention will now be further described by way of Examples, which are meant to serve to assist one of ordinary skill in the art in carrying out the invention and are not intended in any way to limit the scope of the invention.

20 EXAMPLES

Example 1

Materials & Methods

25

Materials

Endoproteinase Lys-C and Asp-N, peptide-*N*-glycosidase F (PNGase F), endoglycosidase H (endo H), neuraminidase, and O-glycosidase are purchased from Roche Biochemicals. Cyanogen bromide, trifluoroacetic acid, and calibration
30 standards (angiotensin, insulin, myoglobin, oxidised insulin B-chain, and TPCK-treated trypsin) are from Sigma Chemical Co. Glycosylation inhibitor *N*-butyldeoxynojirimycin (NB-DNJ) was a kind gift from Dr. F. Platt, University of Oxford, UK.

Construction of Expression Vectors

pEE-ACEΔ36NJ encodes human tACE that lacks the heavily *O*-glycosylated, 36-residue N-terminal sequence and is truncated after Ser⁶²⁵, thereby lacking most of the juxtamembrane stalk as well as the transmembrane and cytoplasmic domains, and is constructed as follows. The 5' half of the ACE cDNA in the plasmid pLEN-ACE-JMA24 is excised by digestion with BamHI and NheI and replaced with the similarly digested fragment from plasmid pLEN-ACEΔ36N. pLEN-ACE-JMA24 has an engineered EcoRI site at nucleotide (nt) 1984 in the ACE cDNA. The sequence between nt 1854 (the start of the unique BclI site) and nt 1990 (the end of the codon for Ser⁶²⁵) in the native ACE cDNA are amplified by the polymerase chain reaction, using a 3' primer that contains two stop codons (TAA and TAG) after the Ser⁶²⁵ codon, followed by an EcoRI site. The recombinant sequence is inserted into the pLEN-ACE_36N/JMA24 hybrid cut with BclI and EcoRI, to generate pLEN-ACEΔ36NJ. The ACEΔ36NJ coding sequence is excised by digestion of unique XbaI (generated after first subcloning in pBluescript) and EcoRI sites and inserted into the polylinker of the expression vector pEE14, to generate pEE-ACEΔ36NJ.

Cell Culture and Transfections

CHO-K1 cells stably transfected with pLEN-ACE glycosylation mutants are grown and maintained in standard media (50% Ham's F-12/50% DME medium supplemented with 20 mM Hepes, pH 7.3) containing 2% fetal bovine serum (heated to 65 °C for 15 mins before use) and 40 μM Zn Cl₂. In addition, native CHO-K1 cells are cotransfected with pEE-ACEΔ36NJ (10 μg) and pSV2NEO (1 μg) by the calcium phosphate precipitate method and clones stably resistant to G418 (Geneticin, Gibco-BRL) are selected and assayed for ACE activity, by procedures detailed previously (9,11). Clones stably expressing pEE-ACEΔ36NJ are further selected for resistance to methionine sulfoximine and then amplified, as described (Davis, SJ, Davies, EA, Barclay, AN, Daenke, S, Bodian, DL, Jones, EY, Stuart, DI, Butters, TD, Dwek, RA, and van der Merwe, PA (1995) *J Biol Chem* 270, 369-375). Methionine sulfoximine-amplified cells are grown first in GMEM-10 (Gibco-BRL) containing 10% dialyzed fetal bovine serum (FBS) (Gibco-BRL) and 1.5 mM NB-DNJ for 3 days and then refed with GMEM-10, 5% dialyzed FBS, 2 mM NB-DNJ. This medium is changed twice over a period of 9 days before harvesting.

Enzyme Purification

Soluble, recombinant tACE (wild-type, ACE Δ 36NJ and ACE glycosylation mutants), is purified from conditioned media by affinity chromatography on a Sepharose-28-lisinopril affinity resin. The protein is quantitated by amino acid analysis and assayed
5 for activity using the substrate hippuryl-L-histidyl-L-leucine, as described (Ehlers, MRE, Chen, Y -N, Riordan, JF (1991) Proc Natl Acad Sci USA 88, 1009-1013).

Deglycosylation of ACE

tACE Δ 36NJ (12.5 nmol) purified from cultures treated with NB-DNJ is digested with
10 endo H (30 mU) in 100 mM sodium phosphate, 0.1 mM ZnCl₂, 1% BSA, pH 6.0 for 16 h at 37°C. The endo H-treated ACE is passed through a lectin affinity column consisting of equal parts of concanavalin A, wheat germ, and lentil lectin, after equilibration with 20 mM Tris-HCl, 0.5 M NaCl at pH 7.4. The deglycosylated ACE is collected in the flowthrough. Free oligosaccharides and any other impurities are
15 removed from the flowthrough fraction by a final lisinopril-Sepharose affinity chromatography step. The homogeneity of the tACE Δ 36NJ after deglycosylation is confirmed by SDS-PAGE on a 4-20% acrylamide gel and MALDI-TOF mass spectrometry.

Construction of Glycosylation Mutants

Minimally glycosylated isoforms of human testis ACE are constructed by the removal of a combination of N-linked glycosylation sites. Glycosylation is abolished by site-directed mutagenesis of the site of attachment in the recognition sequon (Asn-X-Ser/Thr) through a conserved transition of the Asn to a Gln residue. A
25 truncated form of tACE (tACE Δ 36 lacking the first N-terminal 36 residues) is used for the construction of all mutants. tACE Δ 36 cDNA is divided into four fragments and introduced into pGEM-11Zf(+) to facilitate site-directed mutagenesis. An *Eco*47III site is introduced into pGEM-11Zf(+) for cloning of the first and second tACE Δ 36 fragments. A 146 bp *Bam*HI/*Nhe*I digested pBR329 fragment that contains an
30 *Eco*47III site is ligated to *Bam*HI/*Xba*I digested pGEM. The following mutagenic oligonucleotides are used for altering the consensus sites for N-linked glycosylation: g1-F, g2-F, g3-F, g4-F, g5-F, g6-F, g1-R, g2-R and g3-R, with the number referring to each complementary recognition sequon. The mutagenic oligonucleotides encode the

Asn to Gln transition (underlined) at the glycosylation sites and a silent mutation that alters a restriction enzyme recognition site (highlighted in italics). Mutated residues are indicated by bold type:

5 Forward primers:

- g1-F (40-mer): 5'-GAGGCCA***ATT***GGAACACAACACCC***CAG***ATCACCACAGAG-3'
 g2-F (36-mer): 5'-ATGCAAATAGCC***CAG***CACACCC***TTA***GTACGGCACCC-3'
 g3-F (40-mer): 5'-GAAGTTTGATG***TTA***ACCAGTTGCAG***CAG***ACCACTATCAAG-3'
 10 g4-F (30-mer): 5'-GTGTGCCACCC***GCA***GGTAGCTGCCTGCAG-3'
 g5-F (36-mer): 5'-CCGTGCCCTCCTG***AAT***TCTGG***CAG***AAGTCGATGCTGG-3'
 g6-F (36-mer): 5'-ACGGGCCAGCCC***CAG***ATGAGCGCTTCGGCC-3'

Reverse primers are complementary to the forward primers:

15

- g1-R (40-mer): 5'-CTCTGTGGTGAT***CTG***GGTGTTGTAGTTCCAATTGGCCTCG-3'
 g2-R (36-mer): 5'-GGTGCCGTACTTAAGGGTGTG***CTG***GGCTATTTGCAT-3'
 g3-R (40-mer): 5'-CTTGATAGTGGT***CTG***CTGCAACTGGTTAACATCAAACCTTC-3'

- 20 In the first fragment a cDNA-containing mutation at one site served as a template for the mutagenesis of the second site thus generating five variants with either one or two sites out of the first three eliminated. The fourth, fifth and sixth sites (N155, N337 and N586) are eliminated from fragments 2, 3 and 4 respectively using primers g4-F, g5-F, g6-F. The nucleotide sequence of each fragment is confirmed by sequencing to
 25 ensure that only the desired mutation has been created. The four fragments are reassembled to produce eight tACEΔ36 glycosylation mutants (Fig 1).

- The mutants are introduced into the mammalian expression vector, pLEN, to facilitate the production of underglycosylated tACEΔ36 protein. The expression vectors pLEN-tACEΔ36g(n), where n is a set of numbers defining the available N-linked
 30 glycosylation sites, are stably expressed in CHO cells as described previously (Ehlers *et al.* (1996) *Biochemistry* 35, 9549-9559). Similarly, wild-type tACE (tACE-wt), retaining its 36-residue N-terminus as well as the transmembrane region and juxtamembrane stalk, is stably expressed in CHO cells. A deletion mutant,
 35 tACEΔ36NJ, truncated after Ser625, and thus lacking the cytoplasmic and TM

domains as well as most of the juxtamembrane stalk, is constructed (Yu *et al.* (1997) *J. Biol. Chem.* 272, 3511-3519). The vector pEE14-ACEΔ36NJ is transfected into CHO cells and clones stably expressing the mutant are amplified using methionine sulfoxamine, as described (Yu *et al.* (1997) *J. Biol. Chem.* 272, 3511-3519).

5

Inhibition of tACE glycosylation in presence of tunicamycin

CHO cells expressing tACE-wt are grown to confluence in 6-well plates and induced overnight in 2 % medium in the absence and presence of 5 µg/ml tunicamycin. Fresh medium is added and cells are grown in the absence and presence of 5 µg/ml tunicamycin. At 6, 8, 12, 16, 20 and 24 hours detergent-solubilised cell samples are collected. After separating the proteins on 10 % SDS-PAGE they are immunodetected by Western blotting.

Western Blot Analysis of Glycosylation Mutants

15 tACE-wt, tACEΔ36, tACEΔ36-g1, -g2, -g3, -g12, -g13, -g23, -g123 and -g1234 are immunodetected by Western blotting of cell lysates and harvested medium from transfected CHO cells. Proteins are separated on 10 % SDS-PAGE and transferred to nitrocellulose membrane (Hybond-C, Amersham). The membrane is probed with a polyclonal rabbit anti-human tACE antibody. The membrane is developed using the
20 ECL chemiluminescence kit (Amersham) and visualised on autoradiographic film, as per instructions.

Analysis of Release Kinetics and Cleavage Sites

After selection for stable transfectants, kinetic analyses of rates of accumulation of
25 soluble (released) ACE activity and changes in membrane-bound ACE activity are performed in the presence and absence of 1 µM phorbol 12,13 dibutyrate (Schwager *et al.* (1998) *Biochemistry* 37, 15449-15456). Identification of the stalk cleavage sites and analysis of the C-terminal glycosylation site in the released (soluble) protein is carried out using limited proteolysis and MALDI-TOF mass spectrometry by methods
30 described previously (Schwager *et al.* (1998) *Biochemistry* 37, 15449-15456).

Determination of kinetic constants for tACE hydrolysis of Hippuryl-L-histidyl-L-leucine (Hip-His-Leu)

The enzyme is purified from harvest medium via lisinopril affinity chromatography and rates of substrate hydrolysis are determined. Assays are performed in 100 mM potassium phosphate pH 8.3 containing 300 mM NaCl. Initial velocities are calculated over a range of Hip-His-Leu concentrations (0.2–5.0 mM) under initial rate
5 conditions and fit to the Michaelis-Menten equation. K_m and V_{max} values are determined by non-linear regression analysis. Turnover numbers (k_{cat}) and specificity constants (k_{cat}/K_m) are determined using a calculated molecular mass of 100 kDa.

Mass Spectrometry

10 Mass spectrometry is used to verify the glycan occupancy of some of the glycosylation sites of the mutant proteins. All mass spectra are obtained on a MALDI/TOF/MS instrument (Voyager-Elite Biospectrometry Workstation, PerSeptive Biosystems, Inc.). A nitrogen laser (337 nm) is used for desorption ionization. Measurements are carried out either in the linear or reflectron mode with
15 mass accuracies of 0.1% and 0.01%, respectively. Spectra are collected over a hundred laser shots.

Typical matrices used in these experiments are 3,5-dimethoxy-4-hydroxycinnamic acid (sinapinic acid) and α -cyano-4-hydroxycinnamic acid (Aldrich). About 1 μ l of
20 sample solution was mixed with 2 μ l of the matrix solution (10 mg/ml in 50% v/v CH_3CN and H_2O). A 0.5 μ l volume (containing 1–10 pmol of peptide or peptide mixture) of the above solution is loaded on the sample plate and allowed to dry.

Crystallisation

25 The purified tACE- ACEA36NJ and ACE glycosylation mutants are stored at $-20^\circ C$ in 10 mM HEPES and 0.1% PMSF. Extensive crystallisation trials using commercially available crystal screen conditions (Hampton Research) are tried. In addition ammonium sulphate, PEG and MPD matrices are also tried. The best crystals for these proteins are grown at $16^\circ C$ by the vapour diffusion hanging drop method by
30 mixing 2 μ l of the protein solution at ~ 11.5 mg/ml in 10 mM HEPES and 0.1% PMSF with an equal volume of a reservoir solution containing 15 % PEG 4000 (Fluka), 50 mM $CH_3COONa \cdot 3H_2O$ (Sigma Chemical Company) pH 4.7 and 10 μ M $ZnSO_4 \cdot 7H_2O$ (Aldrich Chemical Company). Crystals usually appear within 2 weeks and grow to

their maximum size after about a month. The crystals belong to $P2_12_12_1$ space group, with 1 molecule in the crystallographic asymmetric unit and some 49 % of the crystal volume occupied by the solvent (cell dimensions: $a=56.47\text{ \AA}$, $b=84.90\text{ \AA}$, $c=133.99\text{ \AA}$, $\alpha=90^\circ$, $\beta=90^\circ$ and $\gamma=90^\circ$). tACE-ACE Δ 36NJ crystals diffract to 2 \AA while tACE-
5 ACE Δ 36NJ-g13 and tACE- ACE Δ 36NJ-g1234 crystals diffract to 3.0 \AA and 2.8 \AA respectively on a Synchrotron Radiation Source. All crystals are isomorphous.

The tACE-lisinopril (lisinopril.dihydrate) inhibitor complex is obtained by growing the crystals in the presence of inhibitor. In these experiments the protein solution is
10 mixed with 10 mM of the inhibitor and mixed with an equal volume of the reservoir solution before setting up the crystallisation. Single crystals belonging to the $P2_12_12_1$ orthorhombic space group (isomorphous with the native crystals) suitable for diffraction work appear after about 4 weeks.

15 *X-ray diffraction data collection*

Before data collection, all crystals are flash-cooled at 100 K in a cryoprotectant containing 15 % PEG 4000, 50 mM $\text{CH}_3\text{COONa}\cdot 3\text{H}_2\text{O}$ pH 4.7, $10\text{ }\mu\text{M}$ $\text{ZnSO}_4\cdot 7\text{H}_2\text{O}$ and 25% glycerol with and without respective entities – such as ACE inhibitors. All the X-ray data are collected at 100 °K using a Synchrotron Radiation Source (ESRF-
20 Grenoble, France). Multi-wavelength anomalous dispersion (MAD) data are collected with crystals of tACE-lisinopril complex at peak of Zn K-edge (1.2825 \AA), inflection (1.28322 \AA) and remote (0.95373 \AA) wavelengths. An anomalous dataset at long wavelength (1.7712 \AA), the closest possible wavelength to Sulphur K-edge is also collected. All other heavy atom data sets are collected at the SRS-Daresbury
25 (UK) and processed with anomalous signal. Out of more than 32 soaks with different heavy atoms, only three are found to be useful in phasing. These three (Pt, Pd & Os) derivatives are prepared by soaking the tACE-lisinopril complex crystals for ~ 10 to 60 minutes in the presence of 1-5 mM heavy atom solutions. Raw data images are indexed and scaled using the DENZO and SCALEPACK modules of the HKL suite
30 [Otwinowski M and Minor W. (1997) *Methods Enzymol* 276, 307-326].

Example 2

Expression of glycosylation mutants in CHO cells and the kinetics of release

- The role of *N*-linked glycosylation in the expression and processing of tACE Δ 36 is investigated to establish the minimal glycosylation requirements for the expression of
- 5 correctly folded enzymatically-active protein. The eight glycosylation mutants constructed are transfected into CHO cells and the effect of deglycosylation on the activity, expression and processing of tACE Δ 36 is assessed by enzyme assays, immunodetection and cleavage site analysis.
- 10 Western blot analysis of cellular and soluble tACE Δ 36 glycoforms reveal proteins with increased mobility relative to glycosylated wild type tACE (tACE-wt) (Fig 2) and which is dependent upon on their degree of glycosylation. Furthermore, differences are detected in the expression and processing of the various glycoforms. Comparatively low levels of tACE Δ 36-g2 protein in cellular extracts (Fig. 2A), and
- 15 its absence in the harvest medium (Fig. 2B), may suggest intracellular degradation and/or deficient processing of the protein. Whilst tACE Δ 36-g1 demonstrates comparable levels of expression to the other proteins (Fig. 2A), processing and solubilisation appears to be less efficient than tACE Δ 36-g3, -g123, and -g1234 (Fig. 2B). Tunicamycin partially inhibits the formation of mature, glycosylated tACE-wt.
- 20 Western blot analysis of cellular tACE-wt in the absence of tunicamycin reveals a 105 kDa mature, glycosylated protein (Fig 3). In the presence of tunicamycin an additional smaller, deglycosylated 85 kDa protein is detected (Fig 3).
- The K_m and k_{cat} values obtained for the hydrolysis of Hip-His-Leu by tACE (Table 3)
- 25 are in agreement with those previously published for the C-fragment of the human endothelial isoform ($K_m = 2.0$ mM) (10). Differences in the kinetic constants of glycosylated and under-glycosylated tACE Δ 36 mutants are negligible and are not considered sufficiently different to reflect major alterations in the conformation and activity of the protein. Glycosylation of tACE Δ 36 at one (tACE Δ 36-g3) or two
- 30 (tACE Δ 36-g13) N-terminal glycosylation sequons is sufficient in maintaining the functional integrity of the enzyme. Furthermore, treatment of cells expressing tACE Δ 36NJ with the glucosidase I inhibitor NB-DNJ, do not alter the kinetic properties of the expressed enzymes.

Example 3

Kinetics of release and analysis of juxtamembrane cleavage sites

5

Independent transfections of CHO cells with tACE Δ 36-g1, -g12, -g123 and -g1234 are performed which yield consistent results for each mutant (Fig. 4). All glycosylation mutants show similar levels of phorbol ester stimulation. Thus, *N*-linked glycosylation does not appear to affect solubilisation of the membrane-anchored enzyme. Further protein analysis is performed to: 1) identify the C-terminal peptide to determine whether cleavage of tACE Δ 36-g1, -g13 and -g1234 occurs at the same residues as tACE and 2) to investigate the glycosylation status of the seventh recognition sequon which lies seven residues proximal to the tACE cleavage site. The mass spectra of endoproteinase Lys-C digested peptides of tACE Δ 36-g1, -g13 and -g1234 reveal three $[M+H]^+$ ions of m/z 1698.7, 1690.5 and 1690.9, respectively (Table 2), which are in close agreement with the theoretical mass of the C-terminal peptide (calculated m/z 1690.8).

Thus, tACE Δ 36-g1, -g13 and -g1234 proteolysis occurs between Arg627 and Ser628, which is at the same site as tACE-wt. The spectra of the mutant tACE Δ 36NJ reveals a $[M+H]^+$ ion at m/z 1463.1 which corresponds to the calculated mass of the peptide Leu614 to Ser625 confirming that truncation occurs at Ser625 and that there is no further limited proteolysis of the C-terminus (Table 2).

25 Example 4

Structure of ACE

The crystal structure of the native ACE enzyme is determined to 2.0 Å resolution. The structure from residues 71-648 adopts an overall ellipsoid shape (dimensions ~72Å x 57Å x 48Å) with a central groove that extends for about 30Å into the molecule and effectively divides the protein into two "domains" (labelled I and II, Fig. 7a,b). On top of the molecule there is a N-terminal "flap" that allows access to the active site cleft. Like the recently determined zinc-peptidase structure-neurolysin,

ACE is also bristling with helices and is comprised of twenty α -helices (with almost equal distribution of helices in both domains) and seven 3_{10} -helices (Fig. 7c). This makes the molecular architecture very compact and rigid as observed from the thermal parameters (crystallographic B-factors) for the structure. The only β -structure which accounts for 4% of all residues occurs as six relatively short strands, two of which are located near the active site (Fig. 7a). The boundaries of the groove are provided by domain II ($\alpha 13$, $\alpha 14$, $\alpha 15$, $\alpha 17$, $\beta 4$) with part of the domain I forming the flap ($\alpha 1$, $\alpha 2$, $\alpha 3$). In addition the base of the scaffold is formed by helices $\alpha 6$ and $\alpha 8$ and helix $\alpha 15$ serves as an anchor.

10

Eight C-terminal residues are disordered in the crystal structure and most of this flexible region constitutes the unconstrained juxtamembrane region distal to the wild-type ACE cleavage site. The α -helix from Ala 620 to His 641($\alpha 20$) defines the C-terminal boundary of the ectodomain and this is in agreement with previous ACE mutagenesis and cleavage-secretion studies (Ehlers *et al.*, 1996; Chubb *et al.*, 2002). Residues Ser 466-Gly 469 are disordered in the structure. Five hundred and four ordered water molecules were identified in the native structure. All six glycosylation sites (g1-6, Fig. 7c) are exposed and g1 site is closest to the N-terminus of the molecule. Sketchy density was observed for N-linked carbohydrates in all the glycosylation sites (Fig 7c) and modelled as N-acetylglucosamine (NAG) in the native structure. The co-ordinates of underglycosylated tACE Δ 36NJ ACE are shown in Table A.

20

Example 5

25 Zinc co-ordination

ACE belongs to the gluzincin family of metalloproteases (Hooper, 1994). Zinc is known to be an important catalytic component of ACE. In the structure, the active site helices $\alpha 13$ and $\alpha 14$ define the substrate binding cleft of this peptidase. One highly ordered zinc ion ($B\text{-factor}=16.34\text{\AA}^2$) is bound at the active site. The helix $\alpha 13$ contains the HEXXH zinc binding motif (known to be important for the catalytic activity of ACE, Wei *et al.*, 1991), with its two zinc coordinating histidines (His 414

30

and His 418) and Glu 442 (from α 14 helix) acts as the third ligand (Fig 7c). Additional coordination is provided by an acetate ion (from the crystallization medium) bound at the active site of the native enzyme (Fig. 8a). It has been reported previously that the recruitment of zinc ion in ACE catalysis is analogous to that in thermolysin (Williams *et al.*, 1994; Corvol *et al.*, 1995) and our structural data shows that the zinc binding sites in both proteins are indeed very similar (r.m.s.deviation 1.52Å) except the acetate ion which is replaced by a water molecule in the coordination sphere in thermolysin. The active site pocket in ACE is occupied by 3 ordered water molecules. In addition, a stretch of clear electron density (at 3σ level) was observed ($\sim 5\text{\AA}$ away from the zinc ion) at the active site which is interpreted as part of butyl succinate (Fig 8a).

Example 6

Activation of ACE by chloride ions

15

Substrate hydrolysis by ACE is activated by chloride anions and, whereas some substrates can be cleaved in the absence of chloride, it is an absolute requirement for angiotensin I (Bunning and Riordan, 1983; Shapiro *et al.*, 1983). Our structure revealed the location of two chloride ions (Fig. 7a, c). The first chloride ion (Cl1, 20.7Å away from the zinc ion) is bound to three ligands, Arg 520 (NH1), Arg 217 (NE), Trp 516 (NE1) and water and is surrounded by a hydrophobic shell of four tryptophans. The second anion (Cl2, 10.4Å away from the zinc ion) is bound to Arg 553 (NE) in agreement with previous report showing Arg 1098 (the analogous Arg residue in the C-domain of somatic ACE) is critical for chloride dependence of ACE activity (Liu *et al.*, 2001). Tyr 255 and a water molecule are the other two Cl2 ligands. The two chloride ions (separated by 20.3Å) in ACE are bound almost in a triangular conformation –in accordance with the near equatorial coordination and accommodation of planar trigonal anions in α -amylase where the chloride ions are involved in the allosteric activation (Aghajari *et al.*, 2002). In addition, the anchoring of Domain II on Domain I scaffold appears to be mediated by the chloride ions.

Mutating Arg 1098 to a lysine resulted in a 100-fold reduction in chloride binding affinity as well as a decrease in substrate affinity (Liu *et al.*, 2001). This might be due

to the contact with the NE atom of arginine as opposed to an NH1 or NH2 atom with lysine which would permit free rotation of the basic terminal nitrogens. Recent studies suggest that the affinity of chloride binding to ACE is directly related to the interactions between the chloride and enzyme as well as the substrate (Liu *et al.*, 5 2001). However, based on the location of both chloride ions in the 3D structure make the latter interaction unlikely. Nevertheless, there is a van der Waals contact between Cl2 and Pro 438 ($\alpha 14$) that could be responsible for maintaining the active site cleft in a conformation which favours substrate accessibility and binding. Indeed $\alpha 14$ contain the third zinc co-ordinating ligand Glu 442. Thus, the chloride interactions likely 10 cause the enzyme to adopt conformations that permit higher affinity substrate binding and that it is not important in substrate binding *per se*.

Example 7

15 Structure determination and refinement of an ACE-lisinopril complex

The crystal structure of tACE bound to the potent lisinopril inhibitor ($K_i=27 \times 10^{10}M$, Wei *et al.*, 1991) complex is determined by a combination of MAD and MIRAS (Multiple Isomorphous Replacement with Anomalous Scattering) procedures. The 20 position of zinc atom is unambiguously identified using the anomalous difference Patterson maps calculated using diffractions data at peak wavelength. The MAD phases thus obtained are not very strong and thus additional phase information is obtained using MIRAS procedures with three- Platinum (K_2PtCl_4), Palladium (K_2PdCl_4) and Osmium ($OsCl_3$) heavy atom derivatives. The identified Zn site is 25 used to obtain the starting phases in each derivative. Double difference Fourier maps calculated using FFT routine in CCP4 program [Collaborative computational project Number 4. The CCP4 Suite: Programs for Protein Crystallography (1994) Acta Crystallogr. D 50, 760-763] gave the first major binding site and the phases from the combined Zn and first major site are used to get additional major/minor sites for each 30 derivative. All heavy atom binding sites and the Zn site are refined to 2.8 Å resolution using the program MLPHARE [Collaborative computational project Number 4. The CCP4 Suite: Programs for Protein Crystallography (1994) Acta Crystallogr. D 50, 760-763] and SHARP [De La Fortelle, E. & Bricogne, G.

Maximum-likelihood heavy-atom parameters refinement in the MIR and MAD methods (1997) *Methods Enzymol.* 276, 472-494]. The overall figure of merit from SHARP is 0.38 (at 2.8 Å resolution) and is improved to 0.89 (at 2.0 Å) by iterative solvent flattening, phase combination and phase extension with the program SOLOMON [Abrahams, J. P. & Leslie, A. G. W. Methods used in structure determination of bovine mitochondrial F1 ATPase. (1996) *Acta Crystallogr. D* 52, 110-119]. Model building is carried out manually using the program O [Jones, T. A., Zou, J. Y., Cowan, S. W. & Kjeldgaard, M. Improved methods for building protein models in electron density maps and the location of errors in these models (1991) *Acta Crystallogr. A* 47, 110-119]. Refinement of the model is carried out using the program CNS [Brünger, A. T. et al. Crystallography & NMR System: A new software suite for macromolecular structure determination. (1998) *Acta Crystallogr. D* 54, 905-921]. During the final stages of refinement water molecules, zinc ion and the inhibitor molecule are inserted in the respective structure. Both the native and inhibitor complex structures are refined at 2.0 Å resolution with ~94 % residues in the maximum allowed region and no residue in the disallowed region of the Ramachandran map. The final structure of the tACE and ACE- lisinopril complex has an R_{free} [Brünger, A. T. Free R value: a novel statistical quantity for assessing the accuracy of crystal structure. (1992) *Nature* 355, 472-475] of 22.08 and 21.88 %, and a final R_{cryst} of 18.29 and 18.14 % respectively.

Highly ordered binding of the inhibitor (overall B-factor 15.26 Å²) in an extended conformation with the aromatic phenyl group stretching towards the flap (Fig 7a) and its lysine side chain parallel to the HEXXH motif (Table 1). Upon complex formation no significant rearrangement of active site residues was observed. The P₁ carboxylate of lisinopril which is substituted for the normal substrate scissile amide carbonyl is well positioned to bind to the active site zinc (located between subsites S₁ and S₁'). Thus lisinopril provides a coordinating atom (provided by an acetate ion in the native structure, Fig 8a), while the other three (two histidines and a glutamic acid) being the same as in the native structure (Fig. 8b). The phenyl ethyl group binds to the S₁ subsite and the lysyl amine to Glu 193 via van der Waals interactions at the S₁' subsite of ACE. Surprisingly, the C-terminal carboxylate which is thought to interact with a positively charged arginine residue instead binds to a lysine (Lys 542) as well as Tyr 551. The high affinity is attributable to the presence of the S-configuration aromatic,

aralkyl or aliphatic groups able to bind to the S₁ site (Brenner et al., 1990). The contact residues for the lisinopril complex are shown in Table 1. The co-ordinates of the underglycosylated tACEΔ36NJ ACE-lisinopril complex are shown in Table B.

5 Example 8

The homology of ACE with other metallopeptidases

ACE belongs to the M2 family of zinc binding metallopeptidases which falls under the umbrella of the MA clan. Outside the HEXXH metal coordinating signature sequence of this family there is little sequence similarity between ACE and other members of the family. Surprisingly, peptidases such as thermolysin (MA clan, M4 family) and carboxypeptidase A (MC clan, M14 family) which have been used in comparative molecular field analysis and 3D quantitative structure-activity relationship studies (Waller & Marshall, 1993) showed no structural homology with ACE.

Surprisingly, structural comparison of ACE with other protein structures using the DALI server (Holm and Sander, 1999) showed significant structural homology with that of neurolysin (Brown *et al.*, 2001), a protein involved in neurotensin metabolism (Fig. 3a, b). Neurolysin is a member of the M3 family of thimet oligopeptidases and like ACE, belongs to the family of metallopeptidases bearing the HEXXH active site motif (Rawlings and Barrett, 1995; Brown *et al.*, 2001). It also comprises of an abundance of α -helices with the β -structure accounting for only 6% of all residues. The two proteins do not exhibit any amino acid sequence similarity (close to random score), yet when the two structures are optimally superimposed (using DALI server), there is noticeable match with an r.m.s. deviation of 4.0Å for 143 C α atoms. It appears that the core structure for the two proteins are highly similar with significant differences in loops on the outer surface in the case of neurolysin (Fig. 3a,b). The striking similarity also extends to the active site region in neurolysin consisting of a deep narrow channel that divides the molecule into two halves. It has been speculated that using the flexible secondary structure elements in the active site cavity, the neuropeptidase can effectively cleave a variety of small peptides. Likewise in ACE,

the geometry of the active site groove clearly accounts for ACE's inability to hydrolyse large, folded substrates. Furthermore, the enzyme's preference for oligopeptide substrates of about thirteen residues or less suggests that the substrate does not have the same freedom to extend outside of the channel during catalysis.

5

Example 9

Substrate specificity

- 10 The geometry of the active site channel clearly accounts for ACE's inability to hydrolyse large, folded substrates. Furthermore, the enzyme's preference for oligopeptide substrates of about thirteen residues or less suggests that the substrate does not have the same freedom to extend outside of the channel during catalysis.

15 Example 10

Crystallization of ACE mutants

- 20 tACE Δ 36-g1234 and tACE Δ 36-g1,3 mutants are successfully crystallised under similar conditions as tACE Δ 36NJ protein (Fig 5). Preliminary diffraction experiments show that tACE Δ 36-g1234 crystals diffract to at least 2.8 Å and tACE Δ 36-g1,3 crystals diffract to 3.0 Å respectively and these crystals are isomorphous with tACE Δ 36 crystals.

25 CONCLUSIONS

- The minimal glycosylation requirements for the expression and processing of enzymatically-active human tACE are determined by progressive deglycosylation. To investigate which sugars are vital for tACE expression, a series of mutants are
30 constructed that contain a limited number of sites for *N*-linked glycosylation. *N*-glycan recognition sequons within the protein sequence are disrupted by mutagenesis of the Asn to a Gln within the recognition sequon.

The removal of a large percentage of glycans does not hamper the expression of enzymatically-active tACE Δ 36 and the presence of glycans at two of the three N-terminal sites is sufficient to produce protein that retain the kinetic properties of the native enzyme. Furthermore, the minimum *N*-linked glycosylation that allowed for enzymatically-active tACE to be expressed is the presence of glycans at the first or third site. Glycosylation at either of these sites appears to be sufficient for protein folding, whereas glycosylation of the second site only, results in rapid intracellular degradation. This is in agreement with the glycosylation requirements of active rabbit ACE expressed in mammalian cells and yeast which also has a minimal requirement of at least one of the three N-terminal sites (3a).

In the construction of the tACE Δ 36 glycosylation mutants, the seventh site which is not present in rabbit tACE is not targeted as it has been shown to be unglycosylated (7a). With the removal of the glycosylated sequons, it is possible that this site may be glycosylated in order to compensate for the loss of oligosaccharide chains. However, this is not the case and that even when there is only one *N*-linked oligosaccharide, this does not occur.

There is a preference for oligosaccharides to be attached to sequons containing threonine residues rather than serine residues. This is observed in human tACE, where all sequons with a serine in the third position are partially glycosylated and those with threonine are fully glycosylated, except for the seventh site, which has a threonine in the third position (7a).

The fact that glycosylation at the seventh site appears to be occluded by the presence of the tryptophan, rather than the structure of the juxtamembrane region, is supported by the findings that a tACE deletion mutant, tACE- Δ 6, which generates a novel Asn-Arg-Ser sequon adjacent to the wild-type cleavage site, is glycosylated (14a). The extended conformation of oligosaccharides may prevent access of the secretase at this point resulting in displacement of the wild-type cleavage site 13 residues towards the C-terminus (14a).

CHO cells expressing wild-type tACE (tACE-wt) are exposed to tunicamycin, which inhibits N-linked glycosylation, to determine the effect of complete deglycosylation on the expression and activity of tACE over time. Cellular tACE-wt activity in cells treated with tunicamycin is approximately three-fold lower than that of untreated cells (data not shown) and a smaller immature form of the protein is observed by Western blot analysis. These results are consistent with the interpretation that the smaller 85 kDa-protein is the deglycosylated form and the 105 kDa-protein, the mature glycosylated form (7a), (9a), (14a). Thus, tunicamycin inhibits the formation of mature glycosylated tACE-wt, to a certain degree, resulting in the accumulation of unglycosylated tACE-wt in the cell, without a significant decrease in the total amount of protein compared to untreated cells. Our data suggest that unglycosylated tACE-wt is not solubilised and that it requires the presence of N-glycans for proper expression, maturation and processing.

The enzymatically-active tACE-wt present in cells treated with tunicamycin is most likely the product of a pool of glycosylated tACE-wt, which is either produced prior to tunicamycin treatment or is resistant to tunicamycin. Tunicamycin may therefore not be completely effective in CHO cells, whereas in HeLa cells, Kasturi *et al.* found that tunicamycin-treatment resulted in the generation of deglycosylated protein that is degraded intracellularly within three-hours, with no soluble tACE being detected (5a). Thus, it appears that the effect of tunicamycin on tACE glycosylation appears to be cell-specific.

Enzymatic removal of N-linked glycans is used to produce crystals of CD2 glycoprotein that diffracted to 2.5 Å (15a). However, crystallisation trials with deglycosylated tACEΔ36NJ that has a single GlcNAc residue attached to the asparagine residue of the N-linked site only produced needle-like crystals that are not suitable for further diffraction studies. Surprisingly, tACEΔ36NJ expressed in the presence of NB-DNJ, but retaining the simple high mannose oligosaccharides (Glc₃Man₇GlcNAc₂) yielded the best crystals for X-ray diffraction studies and subsequent successful 3D structure determination at 2.0Å resolution.

Interestingly, the presence of the membrane anchor increased the extent of human CD59 glycan processing (16a). Possible reasons for this difference are, that the ectodomain is held closer to the glycan-processing enzymes and/or the longer exposure to the glycosyltransferases. The oligosaccharide processing of soluble
5 tACEΔ36NJ protein may also differ from the membrane-bound form however, expressing the protein in the presence of a glucosidase inhibitor would prevent the production of complex oligosaccharides.

Furthermore, the kinetic properties of this mutant are not influenced by NB-DNJ
10 treatment. Similarly, Yu *et al.* reported identical K_m values for glycosylated and deglycosylated forms of tACEΔ36NJ, in agreement with that of tACE-wt, using furanacryloyl-Phe-Gly-Gly as a substrate (7a). Glucosidase inhibitors, at concentrations required to block trimming of the terminal glucose residues and subsequent complex oligosaccharide formation, can affect cell maturation and
15 apoptosis (Misago M, Tsukada J, Fukuda MN, Eto S (2000) Biochem Biophys Res Commun. 269, 219-225). This treatment also results in a decrease in protein expression (unpublished data). Thus, mutants lacking some of the C-terminal N-linked glycans are used with the objective of producing protein with a minimal number of oligosaccharides that would crystallise in a reproducible fashion.

20 Crystals of glycosylation mutants g13 and g1234 have been grown under similar condition as in the case of tACEΔ36NJ. The glycosylation mutant crystals seem to grow faster than tACEΔ36NJ crystals. However, they are smaller in size in the first instance, but have been proven to be suitable for diffraction work.

25 The determination of the 3D structure of ACE and ACE-lisinopril complex may be effectively used for the development of novel, highly selective ACE modulators targeted, for example, to either the N or the C domain, by structure-based rational drug design. This may produce a new generation of ACE inhibitors with the potential
30 for greater efficacy, fewer side effects and treatment of new indications (e.g. polycythemia). In addition, the unanticipated similarity with neurolysin has shown the structural conservation amongst an emerging family of peptidases with a common evolutionary origin.

In a further aspect, the present invention relates to a composition comprising ACE in a crystalline form.

- 5 In a further aspect, the present invention relates to a scalable 3D model of ACE having at least a portion of the structure co-ordinates shown in Table A or Table B.

All publications mentioned in the above specification are herein incorporated by reference. Various modifications and variations of the described methods and system
10 of the invention will be apparent to those skilled in the art without departing from the scope and spirit of the invention. Although the invention has been described in connection with specific preferred embodiments, it should be understood that the invention as claimed should not be unduly limited to such specific embodiments. Indeed, various modifications of the described modes for carrying out the invention
15 which are obvious to those skilled in molecular biology or related fields are intended to be within the scope of the following claims.

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Table 1

ACE-Lisinopril Contact Residues (hydrogen bonds at the active site)

Ligand atoms	Interacting atoms	Distance (Å)
Lisinopril		
atom		
O1	His 384 NE2	2.76
N1	His 384 NE2	3.24
N1	Ala 385 O	2.92
O4	Lys 542 NZ	2.93
O4	Tyr 551 OH	2.56
O3	Tyr 554 OH	2.77
O2	Wat	2.82
O5	Wat	2.68
N3	Wat	3.01
N3	Wat	3.26
O5	Wat	2.77
N3	Wat	3.11
O2	Glu 415 OE2	2.70
O1	His 544 NE2	3.11

5

Zinc Coordination-ACE-Lisinopril Complex

	Coordination	Distance (Å)
Zn	His 414 NE2	2.04
Zn	His 418 NE2	2.07
Zn	Glu 442 OE1	2.00
Zn	Lis O3	2.14

Lis = Lisinopril

Table 2

Data Collection

Crystal	Wavelength(Å)	Resolution range ^a (Å)	% completeness ^a	$\langle I \rangle / \langle \sigma \rangle$ ^a	$R_{\text{merge}}^{\text{ab}}$ (%)
MAD Phasing data.	Zn Peak 1.2825	50-2.00(2.07-2.00)	94.7 (63.2)	11.54(1.93)	5.4(22.3)
	Zn infl. 1.2832	50-2.01(2.08-2.01)	95.9(72.1)	11.55(1.98)	5.8(23.8)
	Zn rem. 0.9537	50-1.98(2.05-1.98)	94.1(65.8)	15.48(2.63)	4.8(14.9)
	Long Wavelength 1.7712	50-2.66(2.76-2.66)	99.6(97.0)	22.92(4.94)	8.3(21.8)
MIRAS Phasing data					
Pt	0.87	20-2.80(2.9-2.8)	90.2(83.6)	9.94(4.52)	11.2(27.1)
Pt25	0.87	20-2.60(2.69-2.6)	89.9(75.9)	13.6(4.17)	8.8(27.8)
Pd	0.978	50-2.18(2.26-2.18)	89.4(81.2)	26.14(6.73)	5.8(25.8)
Pd2	0.978	30-2.60(2.69-2.6)	95.2(86.7)	16.95(5.46)	9.5(35.7)
Osc1	1.488	50-2.80(2.9-2.8)	96.6(91.4)	18.51(6.16)	13.1(40.4)
Native Data	1.488	50-2.00(2.07-2.0)	98.8(95.7)	22.46(4.44)	8.1(43.2)

Refinement

5

Model	Resolution (Å)	Reflections working / test	R_{crist}^c (%)	R_{free}^d (%)	Rms deviations		B factor Rmsd (Å ²)	
					Bond length (Å)	Bond angle (°)	Bonded Main Chain Atoms	Bonded Side Chain Atoms
Native (ACE)	47.14-2.0	39727 / 1675	18.29	22.08	0.005	1.22	1.281	2.126
Lisinopril complex(A CE-LIS)	47.14-2.0	76164 / 3094	18.14	21.88	0.0055	1.24	1.174	2.048

^aValues in parentheses are for the outer resolution shell.^b $R_{\text{merge}} = \sum |I - \langle I \rangle| / \sum I$, where I is the observed intensity and $\langle I \rangle$ is the average intensity obtained from multiple observations of symmetry related reflections.10 ^c $R_{\text{crist}} = \sum |F_o| - |F_c| / \sum |F_o|$ where F_o and F_c are observed and calculated structure factors respectively.^d R_{free} is obtained for a test set of reflections, consisting of a randomly selected ~ 4 % of reflections.

Table 3

Kinetic parameters for the hydrolysis of Hip-His-Leu by various tACE glycoforms

5

	K_m (mM)	k_{cat} (sec ⁻¹)	k_{cat}/K_m (sec ⁻¹ mM ⁻¹)
tACE-wt	2.7	193	72
tACEΔ36 -g1	1.6	128	79
tACEΔ36 -g3	2.5	111	44
tACEΔ36 -g13	2.7	170	63
tACEΔ36 -g2	inactive	inactive	inactive
tACEΔ36 -g12	2.1	195	94
tACEΔ36 -g123	2.7	189	71
tACEΔ36 -g1234	1.5	85	56
tACEΔ36-NJ ¹	2.6	253	99
tACEΔ36-NJ ²	4.1	289	70

¹ Expressed in CHO cells treated with NB-DNJ.

10

² Expressed in NB-DNJ-untreated CHO cells.

Table 4Mass Spectral Analysis of C-Terminal Endoproteinase Lys-C Peptides^a

5	Peptide	tACEΔ36-g1	tACEΔ36g-1	tACEΔ36-g1234	tACEΔ36NJ
	(residue no. ^b)				
10	598-613 ^c	1951.6 (1951.2)	1950.6 (1951.2)	1950.2 (1951.2)	1951.5 (1951.2)
	614-627 ^d	1689.7 (1690.8)	1690.5 (1690.8)	1690.9 (1690.5)	
	614-625 ^d				1463.1 (1463.5)

^aSoluble (shed) ACE proteins were purified from conditioned medium of transfected cells, digested with endoproteinase Lys-C and analyzed by MALDI-TOF mass spectrometry.

^bAmino acid residue numbering refers to wild type tACE (Ehlers et al 1989). Shown are the masses of the penultimate ^c and ultimate ^d C-terminal peptides. All values are calculated for protonated isotopically averaged molecular masses m/z. In parentheses are expected masses.

Table A

Co-ordinates of underglycosylated tACEΔ36NJ ACE

5
REMARK coordinates from minimization refinement
REMARK refinement resolution: 47.14 - 2.0 A
REMARK starting r= 0.1829 free_r= 0.2206
REMARK final r= 0.1829 free_r= 0.2208

10
REMARK rmsd bonds= 0.005706 rmsd angles= 1.22440
REMARK wa= 0.837519
REMARK target= mlf cycles= 1 steps= 20
REMARK sg= P2(1)2(1)2(1) a= 56.621 b= 85.062 c= 133.791 alpha= 90
beta= 90 gamma= 90

15
REMARK ncs= none
REMARK B-correction resolution: 6.0 - 2.0
REMARK initial B-factor correction applied to fobs :
REMARK B11= 2.826 B22= -1.896 B33= -0.930
REMARK B12= 0.000 B13= 0.000 B23= 0.000

20
REMARK B-factor correction applied to coordinate array B: 0.207
REMARK bulk solvent: density level= 0.355826 e/A³, B-factor= 50.0907
A²
REMARK reflections with |Fobs|/sigma_F < 0.0 rejected
REMARK reflections with |Fobs| > 10000 * rms(Fobs) rejected

25
REMARK theoretical total number of refl. in resol. range: 44472 (100.0 %)
REMARK number of unobserved reflections (no entry or |F|=0):3070(6.9 %)
REMARK number of reflections rejected: 0 (0.0 %)

30
REMARK total number of reflections used: 41402 (93.1 %)
REMARK number of reflections in working set: 39727 (89.3 %)
REMARK number of reflections in test set: 1675 (3.8 %)
CRYST1 56.621 85.062 133.791 90.00 90.00 90.00 P 21 21 21
REMARK VERSION:1.1

35
ATOM 1 CB ALA 71 34.205 71.662 65.620 1.00 47.11
ATOM 2 C ALA 71 36.244 70.263 65.985 1.00 47.34
ATOM 3 O ALA 71 36.117 69.044 65.862 1.00 47.51
ATOM 4 N ALA 71 35.784 72.211 67.437 1.00 47.96
ATOM 5 CA ALA 71 35.164 71.098 66.663 1.00 47.50

40
ATOM 6 N GLU 72 37.307 70.929 65.547 1.00 46.68
ATOM 7 CA GLU 72 38.419 70.260 64.882 1.00 46.09
ATOM 8 CB GLU 72 39.315 71.298 64.200 1.00 46.87
ATOM 9 CG GLU 72 40.370 70.727 63.262 1.00 47.65
ATOM 10 CD GLU 72 39.776 70.111 62.005 1.00 48.95

45
ATOM 11 OE1 GLU 72 38.997 70.801 61.309 1.00 48.20
ATOM 12 OE2 GLU 72 40.096 68.939 61.708 1.00 49.03
ATOM 13 C GLU 72 39.223 69.474 65.916 1.00 45.81
ATOM 14 O GLU 72 39.862 68.466 65.594 1.00 45.67
ATOM 15 N ALA 73 39.184 69.941 67.161 1.00 43.82

50
ATOM 16 CA ALA 73 39.905 69.292 68.249 1.00 42.35
ATOM 17 CB ALA 73 39.995 70.229 69.446 1.00 42.98
ATOM 18 C ALA 73 39.210 67.996 68.646 1.00 40.96
ATOM 19 O ALA 73 39.863 66.990 68.926 1.00 39.62
ATOM 20 N GLU 74 37.881 68.028 68.680 1.00 40.60

55
ATOM 21 CA GLU 74 37.104 66.844 69.025 1.00 40.79
ATOM 22 CB GLU 74 35.620 67.190 69.157 1.00 42.97
ATOM 23 CG GLU 74 35.138 67.389 70.581 1.00 48.05
ATOM 24 CD GLU 74 33.642 67.644 70.649 1.00 51.91
ATOM 25 OE1 GLU 74 32.869 66.798 70.142 1.00 53.53

60
ATOM 26 OE2 GLU 74 33.239 68.687 71.210 1.00 53.71

	ATOM	27	C	GLU	74	37.272	65.799	67.931	1.00	38.90
	ATOM	28	O	GLU	74	37.217	64.597	68.192	1.00	38.20
	ATOM	29	N	ALA	75	37.482	66.273	66.706	1.00	37.33
	ATOM	30	CA	ALA	75	37.643	65.395	65.552	1.00	35.44
5	ATOM	31	CB	ALA	75	37.619	66.217	64.268	1.00	34.80
	ATOM	32	C	ALA	75	38.917	64.558	65.613	1.00	33.72
	ATOM	33	O	ALA	75	38.871	63.343	65.434	1.00	34.25
	ATOM	34	N	SER	76	40.053	65.204	65.856	1.00	32.28
	ATOM	35	CA	SER	76	41.319	64.486	65.932	1.00	32.11
10	ATOM	36	CB	SER	76	42.486	65.468	66.012	1.00	33.65
	ATOM	37	OG	SER	76	42.391	66.266	67.175	1.00	40.00
	ATOM	38	C	SER	76	41.326	63.562	67.148	1.00	30.77
	ATOM	39	O	SER	76	41.948	62.501	67.126	1.00	30.49
	ATOM	40	N	LYS	77	40.631	63.974	68.204	1.00	29.20
15	ATOM	41	CA	LYS	77	40.534	63.179	69.424	1.00	29.11
	ATOM	42	CB	LYS	77	39.924	64.021	70.547	1.00	32.76
	ATOM	43	CG	LYS	77	39.438	63.219	71.745	1.00	35.84
	ATOM	44	CD	LYS	77	38.889	64.135	72.830	1.00	42.05
	ATOM	45	CE	LYS	77	38.072	63.355	73.847	1.00	44.16
20	ATOM	46	NZ	LYS	77	36.868	62.741	73.208	1.00	47.21
	ATOM	47	C	LYS	77	39.662	61.952	69.160	1.00	28.16
	ATOM	48	O	LYS	77	39.966	60.844	69.613	1.00	25.92
	ATOM	49	N	PHE	78	38.573	62.163	68.427	1.00	26.59
	ATOM	50	CA	PHE	78	37.661	61.079	68.083	1.00	26.14
25	ATOM	51	CB	PHE	78	36.495	61.610	67.250	1.00	26.37
	ATOM	52	CG	PHE	78	35.634	60.527	66.657	1.00	28.09
	ATOM	53	CD1	PHE	78	34.772	59.788	67.459	1.00	27.07
	ATOM	54	CD2	PHE	78	35.700	60.238	65.297	1.00	27.78
	ATOM	55	CE1	PHE	78	33.983	58.776	66.916	1.00	28.93
30	ATOM	56	CE2	PHE	78	34.914	59.224	64.745	1.00	29.96
	ATOM	57	CZ	PHE	78	34.055	58.493	65.558	1.00	27.46
	ATOM	58	C	PHE	78	38.407	60.018	67.281	1.00	24.51
	ATOM	59	O	PHE	78	38.293	58.825	67.555	1.00	25.03
	ATOM	60	N	VAL	79	39.174	60.460	66.290	1.00	24.17
35	ATOM	61	CA	VAL	79	39.928	59.539	65.448	1.00	25.75
	ATOM	62	CB	VAL	79	40.647	60.296	64.315	1.00	27.26
	ATOM	63	CG1	VAL	79	41.588	59.362	63.574	1.00	29.96
	ATOM	64	CG2	VAL	79	39.618	60.868	63.352	1.00	26.11
	ATOM	65	C	VAL	79	40.944	58.732	66.255	1.00	26.10
40	ATOM	66	O	VAL	79	41.109	57.527	66.030	1.00	26.21
	ATOM	67	N	GLU	80	41.624	59.390	67.191	1.00	25.41
	ATOM	68	CA	GLU	80	42.605	58.707	68.031	1.00	26.15
	ATOM	69	CB	GLU	80	43.302	59.699	68.974	1.00	30.36
	ATOM	70	CG	GLU	80	44.036	60.832	68.267	1.00	34.75
45	ATOM	71	CD	GLU	80	44.759	61.760	69.233	1.00	39.99
	ATOM	72	OE1	GLU	80	44.149	62.161	70.251	1.00	41.71
	ATOM	73	OE2	GLU	80	45.934	62.096	68.971	1.00	40.92
	ATOM	74	C	GLU	80	41.910	57.627	68.858	1.00	23.94
	ATOM	75	O	GLU	80	42.408	56.504	68.979	1.00	22.22
50	ATOM	76	N	GLU	81	40.759	57.969	69.431	1.00	22.01
	ATOM	77	CA	GLU	81	40.011	57.013	70.237	1.00	22.46
	ATOM	78	CB	GLU	81	38.831	57.706	70.927	1.00	25.23
	ATOM	79	CG	GLU	81	39.227	58.391	72.231	1.00	29.28
	ATOM	80	CD	GLU	81	38.161	59.326	72.773	1.00	32.89
55	ATOM	81	OE1	GLU	81	36.960	58.986	72.693	1.00	34.63
	ATOM	82	OE2	GLU	81	38.531	60.399	73.298	1.00	35.89
	ATOM	83	C	GLU	81	39.524	55.860	69.369	1.00	21.38
	ATOM	84	O	GLU	81	39.678	54.686	69.725	1.00	19.63
	ATOM	85	N	TYR	82	38.948	56.197	68.220	1.00	19.43
60	ATOM	86	CA	TYR	82	38.461	55.179	67.303	1.00	19.72
	ATOM	87	CB	TYR	82	37.927	55.832	66.024	1.00	19.77

	ATOM	88	CG	TYR	82	37.545	54.837	64.951	1.00	20.35
	ATOM	89	CD1	TYR	82	36.376	54.078	65.054	1.00	19.98
	ATOM	90	CE1	TYR	82	36.033	53.145	64.074	1.00	20.16
	ATOM	91	CD2	TYR	82	38.363	54.638	63.842	1.00	20.13
5	ATOM	92	CE2	TYR	82	38.033	53.708	62.858	1.00	21.53
	ATOM	93	CZ	TYR	82	36.866	52.967	62.980	1.00	20.57
	ATOM	94	OH	TYR	82	36.538	52.053	62.011	1.00	19.33
	ATOM	95	C	TYR	82	39.581	54.201	66.940	1.00	18.48
	ATOM	96	O	TYR	82	39.382	52.987	66.944	1.00	19.79
10	ATOM	97	N	ASP	83	40.760	54.734	66.637	1.00	20.94
	ATOM	98	CA	ASP	83	41.889	53.897	66.236	1.00	23.21
	ATOM	99	CB	ASP	83	43.052	54.766	65.748	1.00	25.46
	ATOM	100	CG	ASP	83	44.149	53.945	65.092	1.00	31.10
	ATOM	101	OD1	ASP	83	43.862	53.293	64.065	1.00	33.90
15	ATOM	102	OD2	ASP	83	45.293	53.941	65.597	1.00	31.88
	ATOM	103	C	ASP	83	42.398	52.937	67.307	1.00	23.85
	ATOM	104	O	ASP	83	42.600	51.751	67.037	1.00	23.74
	ATOM	105	N	ARG	84	42.617	53.431	68.521	1.00	23.48
	ATOM	106	CA	ARG	84	43.117	52.548	69.565	1.00	24.21
20	ATOM	107	CB	ARG	84	43.576	53.351	70.792	1.00	25.95
	ATOM	108	CG	ARG	84	42.574	54.331	71.350	1.00	28.39
	ATOM	109	CD	ARG	84	43.155	55.060	72.557	1.00	29.91
	ATOM	110	NE	ARG	84	44.269	55.945	72.220	1.00	28.71
	ATOM	111	CZ	ARG	84	44.211	57.273	72.280	1.00	29.24
25	ATOM	112	NH1	ARG	84	43.093	57.877	72.660	1.00	28.18
	ATOM	113	NH2	ARG	84	45.278	58.001	71.982	1.00	30.94
	ATOM	114	C	ARG	84	42.107	51.474	69.959	1.00	22.21
	ATOM	115	O	ARG	84	42.489	50.332	70.192	1.00	20.72
	ATOM	116	N	THR	85	40.824	51.823	70.010	1.00	20.97
30	ATOM	117	CA	THR	85	39.796	50.845	70.365	1.00	21.86
	ATOM	118	CB	THR	85	38.457	51.528	70.752	1.00	22.90
	ATOM	119	OG1	THR	85	37.996	52.349	69.673	1.00	24.14
	ATOM	120	CG2	THR	85	38.637	52.389	72.006	1.00	22.66
	ATOM	121	C	THR	85	39.531	49.853	69.227	1.00	22.63
35	ATOM	122	O	THR	85	39.271	48.671	69.468	1.00	23.06
	ATOM	123	N	SER	86	39.597	50.331	67.988	1.00	22.84
	ATOM	124	CA	SER	86	39.364	49.467	66.833	1.00	23.43
	ATOM	125	CB	SER	86	39.358	50.290	65.542	1.00	20.63
	ATOM	126	OG	SER	86	38.201	51.101	65.469	1.00	22.91
40	ATOM	127	C	SER	86	40.420	48.375	66.737	1.00	23.93
	ATOM	128	O	SER	86	40.107	47.224	66.431	1.00	26.22
	ATOM	129	N	GLN	87	41.671	48.739	66.996	1.00	25.11
	ATOM	130	CA	GLN	87	42.764	47.777	66.934	1.00	27.65
	ATOM	131	CB	GLN	87	44.076	48.441	67.349	1.00	29.31
45	ATOM	132	CG	GLN	87	44.611	49.434	66.340	1.00	34.89
	ATOM	133	CD	GLN	87	45.901	50.079	66.797	1.00	38.51
	ATOM	134	OE1	GLN	87	46.854	49.392	67.170	1.00	39.63
	ATOM	135	NE2	GLN	87	45.942	51.407	66.766	1.00	40.39
	ATOM	136	C	GLN	87	42.494	46.575	67.832	1.00	27.47
50	ATOM	137	O	GLN	87	42.700	45.430	67.430	1.00	27.09
	ATOM	138	N	VAL	88	42.027	46.843	69.049	1.00	27.70
	ATOM	139	CA	VAL	88	41.732	45.784	70.009	1.00	27.09
	ATOM	140	CB	VAL	88	41.457	46.363	71.418	1.00	28.38
	ATOM	141	CG1	VAL	88	41.137	45.231	72.392	1.00	28.68
55	ATOM	142	CG2	VAL	88	42.666	47.156	71.902	1.00	28.04
	ATOM	143	C	VAL	88	40.531	44.933	69.597	1.00	26.88
	ATOM	144	O	VAL	88	40.628	43.711	69.537	1.00	26.76
	ATOM	145	N	VAL	89	39.403	45.577	69.318	1.00	25.88
	ATOM	146	CA	VAL	89	38.199	44.852	68.928	1.00	26.99
60	ATOM	147	CB	VAL	89	36.985	45.813	68.803	1.00	27.18
	ATOM	148	CG1	VAL	89	37.315	46.950	67.862	1.00	32.87

	ATOM	149	CG2	VAL	89	35.765	45.060	68.306	1.00	31.36
	ATOM	150	C	VAL	89	38.375	44.071	67.616	1.00	27.29
	ATOM	151	O	VAL	89	37.906	42.937	67.497	1.00	25.50
	ATOM	152	N	TRP	90	39.048	44.674	66.637	1.00	26.45
5	ATOM	153	CA	TRP	90	39.273	44.010	65.354	1.00	27.47
	ATOM	154	CB	TRP	90	39.817	45.003	64.325	1.00	29.71
	ATOM	155	CG	TRP	90	38.809	46.020	63.873	1.00	33.63
	ATOM	156	CD2	TRP	90	38.891	46.847	62.707	1.00	35.80
	ATOM	157	CE2	TRP	90	37.752	47.684	62.707	1.00	37.41
10	ATOM	158	CE3	TRP	90	39.817	46.965	61.663	1.00	37.42
	ATOM	159	CD1	TRP	90	37.656	46.375	64.513	1.00	34.94
	ATOM	160	NE1	TRP	90	37.015	47.373	63.819	1.00	36.40
	ATOM	161	CZ2	TRP	90	37.514	48.629	61.700	1.00	38.33
	ATOM	162	CZ3	TRP	90	39.582	47.906	60.661	1.00	39.67
15	ATOM	163	CH2	TRP	90	38.437	48.726	60.690	1.00	40.02
	ATOM	164	C	TRP	90	40.243	42.846	65.510	1.00	27.07
	ATOM	165	O	TRP	90	40.121	41.831	64.824	1.00	27.40
	ATOM	166	N	ASN	91	41.210	42.991	66.409	1.00	25.74
	ATOM	167	CA	ASN	91	42.167	41.920	66.634	1.00	26.47
20	ATOM	168	CB	ASN	91	43.271	42.364	67.597	1.00	26.15
	ATOM	169	CG	ASN	91	44.156	41.212	68.033	1.00	29.44
	ATOM	170	OD1	ASN	91	43.840	40.502	68.987	1.00	30.76
	ATOM	171	ND2	ASN	91	45.261	41.005	67.319	1.00	28.75
	ATOM	172	C	ASN	91	41.442	40.705	67.196	1.00	27.08
25	ATOM	173	O	ASN	91	41.697	39.574	66.780	1.00	26.40
	ATOM	174	N	GLU	92	40.533	40.942	68.138	1.00	26.14
	ATOM	175	CA	GLU	92	39.768	39.858	68.734	1.00	27.35
	ATOM	176	CB	GLU	92	38.906	40.378	69.888	1.00	30.98
	ATOM	177	CG	GLU	92	39.643	40.460	71.214	1.00	37.75
30	ATOM	178	CD	GLU	92	38.847	41.182	72.288	1.00	40.97
	ATOM	179	OE1	GLU	92	37.654	40.855	72.466	1.00	43.05
	ATOM	180	OE2	GLU	92	39.421	42.070	72.955	1.00	41.95
	ATOM	181	C	GLU	92	38.881	39.174	67.705	1.00	25.71
	ATOM	182	O	GLU	92	38.777	37.952	67.689	1.00	25.50
35	ATOM	183	N	TYR	93	38.238	39.961	66.849	1.00	25.38
	ATOM	184	CA	TYR	93	37.367	39.396	65.825	1.00	25.52
	ATOM	185	CB	TYR	93	36.693	40.503	65.012	1.00	25.32
	ATOM	186	CG	TYR	93	35.790	39.961	63.929	1.00	28.08
	ATOM	187	CD1	TYR	93	34.578	39.348	64.248	1.00	28.32
40	ATOM	188	CE1	TYR	93	33.761	38.804	63.260	1.00	31.75
	ATOM	189	CD2	TYR	93	36.165	40.021	62.588	1.00	29.39
	ATOM	190	CE2	TYR	93	35.355	39.477	61.589	1.00	33.01
	ATOM	191	CZ	TYR	93	34.155	38.872	61.933	1.00	33.10
	ATOM	192	OH	TYR	93	33.354	38.334	60.952	1.00	36.34
45	ATOM	193	C	TYR	93	38.161	38.501	64.878	1.00	23.80
	ATOM	194	O	TYR	93	37.725	37.404	64.528	1.00	24.56
	ATOM	195	N	ALA	94	39.325	38.984	64.461	1.00	23.33
	ATOM	196	CA	ALA	94	40.184	38.241	63.552	1.00	24.84
	ATOM	197	CB	ALA	94	41.461	39.034	63.274	1.00	22.84
50	ATOM	198	C	ALA	94	40.526	36.876	64.143	1.00	24.40
	ATOM	199	O	ALA	94	40.589	35.876	63.427	1.00	23.49
	ATOM	200	N	ALA	95	40.739	36.840	65.454	1.00	25.55
	ATOM	201	CA	ALA	95	41.069	35.593	66.136	1.00	25.36
	ATOM	202	CB	ALA	95	41.361	35.864	67.609	1.00	30.67
55	ATOM	203	C	ALA	95	39.928	34.593	66.007	1.00	24.83
	ATOM	204	O	ALA	95	40.138	33.440	65.630	1.00	26.02
	ATOM	205	N	ALA	96	38.718	35.038	66.326	1.00	23.74
	ATOM	206	CA	ALA	96	37.547	34.177	66.244	1.00	23.43
	ATOM	207	CB	ALA	96	36.329	34.904	66.794	1.00	22.21
60	ATOM	208	C	ALA	96	37.284	33.742	64.803	1.00	23.35
	ATOM	209	O	ALA	96	36.934	32.589	64.545	1.00	22.60

	ATOM	210	N	ASN	97	37.451	34.673	63.870	1.00	21.81
	ATOM	211	CA	ASN	97	37.224	34.389	62.456	1.00	22.42
	ATOM	212	CB	ASN	97	37.308	35.695	61.651	1.00	21.62
	ATOM	213	CG	ASN	97	36.768	35.553	60.241	1.00	22.75
5	ATOM	214	OD1	ASN	97	35.968	34.660	59.955	1.00	22.10
	ATOM	215	ND2	ASN	97	37.186	36.450	59.356	1.00	21.12
	ATOM	216	C	ASN	97	38.257	33.373	61.965	1.00	21.42
	ATOM	217	O	ASN	97	37.941	32.480	61.183	1.00	22.56
	ATOM	218	N	TRP	98	39.490	33.502	62.447	1.00	22.34
10	ATOM	219	CA	TRP	98	40.552	32.585	62.059	1.00	22.66
	ATOM	220	CB	TRP	98	41.901	33.085	62.583	1.00	22.16
	ATOM	221	CG	TRP	98	43.016	32.098	62.384	1.00	23.43
	ATOM	222	CD2	TRP	98	43.883	32.003	61.246	1.00	22.99
	ATOM	223	CE2	TRP	98	44.749	30.907	61.470	1.00	24.37
15	ATOM	224	CE3	TRP	98	44.010	32.735	60.055	1.00	21.19
	ATOM	225	CD1	TRP	98	43.381	31.086	63.229	1.00	25.02
	ATOM	226	NE1	TRP	98	44.421	30.365	62.686	1.00	25.09
	ATOM	227	CZ2	TRP	98	45.733	30.526	60.547	1.00	23.12
	ATOM	228	CZ3	TRP	98	44.989	32.354	59.134	1.00	21.49
20	ATOM	229	CH2	TRP	98	45.837	31.258	59.389	1.00	20.86
	ATOM	230	C	TRP	98	40.286	31.170	62.578	1.00	23.96
	ATOM	231	O	TRP	98	40.444	30.190	61.840	1.00	22.16
	ATOM	232	N	ASN	99	39.876	31.071	63.841	1.00	24.47
	ATOM	233	CA	ASN	99	39.596	29.770	64.455	1.00	26.36
25	ATOM	234	CB	ASN	99	39.230	29.936	65.937	1.00	27.31
	ATOM	235	CG	ASN	99	40.368	30.524	66.760	1.00	29.77
	ATOM	236	OD1	ASN	99	41.537	30.432	66.382	1.00	28.77
	ATOM	237	ND2	ASN	99	40.028	31.119	67.899	1.00	30.82
	ATOM	238	C	ASN	99	38.480	29.026	63.724	1.00	25.35
30	ATOM	239	O	ASN	99	38.523	27.802	63.588	1.00	23.96
	ATOM	240	N	TYR	100	37.477	29.762	63.258	1.00	24.11
	ATOM	241	CA	TYR	100	36.380	29.145	62.518	1.00	24.41
	ATOM	242	CB	TYR	100	35.242	30.153	62.308	1.00	27.59
	ATOM	243	CG	TYR	100	34.348	29.829	61.127	1.00	28.29
35	ATOM	244	CD1	TYR	100	33.375	28.834	61.209	1.00	30.33
	ATOM	245	CE1	TYR	100	32.581	28.505	60.101	1.00	29.75
	ATOM	246	CD2	TYR	100	34.508	30.494	59.912	1.00	31.13
	ATOM	247	CE2	TYR	100	33.725	30.174	58.800	1.00	31.87
	ATOM	248	CZ	TYR	100	32.765	29.180	58.902	1.00	32.09
40	ATOM	249	OH	TYR	100	31.995	28.868	57.799	1.00	31.48
	ATOM	250	C	TYR	100	36.892	28.674	61.157	1.00	24.55
	ATOM	251	O	TYR	100	36.698	27.521	60.770	1.00	23.28
	ATOM	252	N	ASN	101	37.538	29.588	60.436	1.00	22.98
	ATOM	253	CA	ASN	101	38.083	29.312	59.111	1.00	21.52
45	ATOM	254	CB	ASN	101	38.799	30.555	58.573	1.00	22.42
	ATOM	255	CG	ASN	101	37.883	31.452	57.766	1.00	20.70
	ATOM	256	OD1	ASN	101	37.843	31.369	56.541	1.00	20.36
	ATOM	257	ND2	ASN	101	37.131	32.307	58.452	1.00	20.18
	ATOM	258	C	ASN	101	39.048	28.130	59.074	1.00	22.49
50	ATOM	259	O	ASN	101	39.092	27.398	58.085	1.00	22.22
	ATOM	260	N	THR	102	39.821	27.953	60.144	1.00	21.87
	ATOM	261	CA	THR	102	40.799	26.866	60.209	1.00	23.29
	ATOM	262	CB	THR	102	42.153	27.364	60.773	1.00	22.46
	ATOM	263	OG1	THR	102	41.985	27.779	62.132	1.00	21.26
55	ATOM	264	CG2	THR	102	42.675	28.544	59.956	1.00	22.88
	ATOM	265	C	THR	102	40.332	25.682	61.055	1.00	25.33
	ATOM	266	O	THR	102	41.100	24.755	61.312	1.00	26.63
	ATOM	267	N	ASN	103	39.073	25.709	61.478	1.00	26.22
	ATOM	268	CA	ASN	103	38.513	24.633	62.293	1.00	27.70
60	ATOM	269	CB	ASN	103	39.154	24.648	63.691	1.00	28.15
	ATOM	270	CG	ASN	103	38.674	23.499	64.576	1.00	31.04

	ATOM	271	OD1 ASN	103	38.244	22.457	64.074	1.00	29.17
	ATOM	272	ND2 ASN	103	38.761	23.701	65.892	1.00	32.86
	ATOM	273	C ASN	103	37.005	24.834	62.382	1.00	26.39
	ATOM	274	O ASN	103	36.486	25.297	63.395	1.00	28.11
5	ATOM	275	N ILE	104	36.312	24.487	61.304	1.00	27.62
	ATOM	276	CA ILE	104	34.864	24.640	61.225	1.00	28.58
	ATOM	277	CB ILE	104	34.370	24.456	59.770	1.00	28.41
	ATOM	278	CG2 ILE	104	32.849	24.581	59.710	1.00	29.27
	ATOM	279	CG1 ILE	104	35.032	25.498	58.861	1.00	28.67
10	ATOM	280	CD1 ILE	104	34.674	25.359	57.387	1.00	27.85
	ATOM	281	C ILE	104	34.128	23.655	62.127	1.00	30.90
	ATOM	282	O ILE	104	34.063	22.460	61.839	1.00	31.19
	ATOM	283	N THR	105	33.579	24.171	63.222	1.00	32.51
	ATOM	284	CA THR	105	32.831	23.360	64.177	1.00	33.92
15	ATOM	285	CB THR	105	33.688	22.982	65.399	1.00	34.56
	ATOM	286	OG1 THR	105	34.015	24.169	66.133	1.00	35.94
	ATOM	287	CG2 THR	105	34.972	22.284	64.965	1.00	33.74
	ATOM	288	C THR	105	31.649	24.176	64.677	1.00	34.62
	ATOM	289	O THR	105	31.575	25.384	64.450	1.00	34.35
20	ATOM	290	N THR	106	30.722	23.518	65.360	1.00	34.69
	ATOM	291	CA THR	106	29.564	24.220	65.889	1.00	35.91
	ATOM	292	CB THR	106	28.546	23.229	66.510	1.00	36.94
	ATOM	293	OG1 THR	106	27.453	23.956	67.085	1.00	40.00
	ATOM	294	CG2 THR	106	29.205	22.386	67.582	1.00	36.78
25	ATOM	295	C THR	106	30.041	25.219	66.945	1.00	35.21
	ATOM	296	O THR	106	29.499	26.318	67.069	1.00	34.43
	ATOM	297	N GLU	107	31.084	24.840	67.679	1.00	35.12
	ATOM	298	CA GLU	107	31.638	25.692	68.725	1.00	35.53
	ATOM	299	CB GLU	107	32.640	24.905	69.576	1.00	38.54
30	ATOM	300	CG GLU	107	32.084	23.613	70.185	1.00	44.28
	ATOM	301	CD GLU	107	32.317	22.385	69.310	1.00	47.02
	ATOM	302	OE1 GLU	107	31.828	22.356	68.161	1.00	48.87
	ATOM	303	OE2 GLU	107	32.998	21.444	69.775	1.00	50.21
	ATOM	304	C GLU	107	32.309	26.957	68.180	1.00	34.45
35	ATOM	305	O GLU	107	32.003	28.066	68.623	1.00	32.19
	ATOM	306	N THR	108	33.227	26.796	67.229	1.00	33.18
	ATOM	307	CA THR	108	33.913	27.949	66.651	1.00	32.17
	ATOM	308	CB THR	108	35.048	27.527	65.687	1.00	31.68
	ATOM	309	OG1 THR	108	34.528	26.660	64.673	1.00	31.48
40	ATOM	310	CG2 THR	108	36.157	26.818	66.452	1.00	31.84
	ATOM	311	C THR	108	32.925	28.834	65.897	1.00	31.26
	ATOM	312	O THR	108	33.107	30.045	65.815	1.00	30.78
	ATOM	313	N SER	109	31.878	28.228	65.347	1.00	31.59
	ATOM	314	CA SER	109	30.865	28.989	64.623	1.00	32.27
45	ATOM	315	CB SER	109	29.888	28.054	63.905	1.00	32.03
	ATOM	316	OG SER	109	30.511	27.388	62.819	1.00	33.62
	ATOM	317	C SER	109	30.094	29.863	65.602	1.00	33.27
	ATOM	318	O SER	109	29.871	31.046	65.352	1.00	31.52
	ATOM	319	N LYS	110	29.695	29.268	66.722	1.00	34.58
50	ATOM	320	CA LYS	110	28.943	29.985	67.741	1.00	36.62
	ATOM	321	CB LYS	110	28.570	29.031	68.880	1.00	39.13
	ATOM	322	CG LYS	110	27.494	29.561	69.819	1.00	43.25
	ATOM	323	CD LYS	110	27.052	28.487	70.807	1.00	46.60
	ATOM	324	CE LYS	110	25.859	28.943	71.639	1.00	48.32
55	ATOM	325	NZ LYS	110	25.369	27.861	72.547	1.00	49.35
	ATOM	326	C LYS	110	29.755	31.162	68.279	1.00	35.77
	ATOM	327	O LYS	110	29.234	32.264	68.449	1.00	36.40
	ATOM	328	N ILE	111	31.037	30.927	68.535	1.00	34.36
	ATOM	329	CA ILE	111	31.909	31.974	69.054	1.00	33.18
60	ATOM	330	CB ILE	111	33.296	31.410	69.408	1.00	33.61
	ATOM	331	CG2 ILE	111	34.226	32.537	69.837	1.00	33.24

	ATOM	332	CG1	ILE	111	33.154	30.364	70.517	1.00	34.16
	ATOM	333	CD1	ILE	111	34.458	29.696	70.907	1.00	33.43
	ATOM	334	C	ILE	111	32.073	33.107	68.044	1.00	32.41
	ATOM	335	O	ILE	111	32.075	34.284	68.410	1.00	32.05
5	ATOM	336	N	LEU	112	32.212	32.749	66.772	1.00	30.05
	ATOM	337	CA	LEU	112	32.364	33.752	65.731	1.00	28.87
	ATOM	338	CB	LEU	112	32.591	33.084	64.371	1.00	28.19
	ATOM	339	CG	LEU	112	32.709	34.015	63.157	1.00	28.67
	ATOM	340	CD1	LEU	112	33.778	35.063	63.405	1.00	28.05
10	ATOM	341	CD2	LEU	112	33.035	33.198	61.918	1.00	27.39
	ATOM	342	C	LEU	112	31.127	34.645	65.672	1.00	28.87
	ATOM	343	O	LEU	112	31.243	35.867	65.612	1.00	27.96
	ATOM	344	N	LEU	113	29.942	34.040	65.700	1.00	28.83
	ATOM	345	CA	LEU	113	28.710	34.821	65.641	1.00	29.55
15	ATOM	346	CB	LEU	113	27.488	33.897	65.581	1.00	28.66
	ATOM	347	CG	LEU	113	27.358	33.047	64.313	1.00	27.25
	ATOM	348	CD1	LEU	113	26.146	32.144	64.423	1.00	28.60
	ATOM	349	CD2	LEU	113	27.238	33.955	63.090	1.00	29.42
	ATOM	350	C	LEU	113	28.595	35.772	66.827	1.00	30.99
20	ATOM	351	O	LEU	113	28.035	36.861	66.703	1.00	30.68
	ATOM	352	N	GLN	114	29.134	35.364	67.973	1.00	32.59
	ATOM	353	CA	GLN	114	29.096	36.205	69.164	1.00	34.05
	ATOM	354	CB	GLN	114	29.461	35.393	70.414	1.00	35.86
	ATOM	355	CG	GLN	114	28.397	34.363	70.797	1.00	41.83
25	ATOM	356	CD	GLN	114	28.802	33.483	71.970	1.00	44.71
	ATOM	357	OE1	GLN	114	29.028	33.966	73.080	1.00	47.69
	ATOM	358	NE2	GLN	114	28.892	32.180	71.726	1.00	47.51
	ATOM	359	C	GLN	114	30.056	37.375	68.992	1.00	33.41
	ATOM	360	O	GLN	114	29.746	38.500	69.380	1.00	33.15
30	ATOM	361	N	LYS	115	31.222	37.114	68.409	1.00	33.19
	ATOM	362	CA	LYS	115	32.194	38.177	68.185	1.00	33.34
	ATOM	363	CB	LYS	115	33.527	37.604	67.695	1.00	35.03
	ATOM	364	CG	LYS	115	34.397	37.022	68.802	1.00	39.16
	ATOM	365	CD	LYS	115	34.872	38.111	69.757	1.00	41.08
35	ATOM	366	CE	LYS	115	35.682	37.534	70.912	1.00	43.92
	ATOM	367	NZ	LYS	115	36.142	38.597	71.855	1.00	43.32
	ATOM	368	C	LYS	115	31.655	39.180	67.172	1.00	32.53
	ATOM	369	O	LYS	115	32.033	40.351	67.192	1.00	30.99
	ATOM	370	N	ASN	116	30.779	38.717	66.283	1.00	33.42
40	ATOM	371	CA	ASN	116	30.180	39.597	65.279	1.00	34.57
	ATOM	372	CB	ASN	116	29.219	38.820	64.368	1.00	36.23
	ATOM	373	CG	ASN	116	29.938	37.996	63.314	1.00	37.73
	ATOM	374	OD1	ASN	116	30.671	38.530	62.479	1.00	37.42
	ATOM	375	ND2	ASN	116	29.719	36.685	63.340	1.00	41.84
45	ATOM	376	C	ASN	116	29.404	40.694	66.001	1.00	34.49
	ATOM	377	O	ASN	116	29.531	41.874	65.683	1.00	33.34
	ATOM	378	N	MET	117	28.597	40.286	66.975	1.00	34.71
	ATOM	379	CA	MET	117	27.794	41.217	67.757	1.00	36.39
	ATOM	380	CB	MET	117	26.943	40.448	68.772	1.00	39.17
50	ATOM	381	CG	MET	117	25.518	40.138	68.319	1.00	43.08
	ATOM	382	SD	MET	117	25.294	40.020	66.531	1.00	49.27
	ATOM	383	CE	MET	117	23.829	41.035	66.302	1.00	47.42
	ATOM	384	C	MET	117	28.670	42.228	68.488	1.00	35.39
	ATOM	385	O	MET	117	28.320	43.402	68.590	1.00	34.85
55	ATOM	386	N	GLN	118	29.814	41.772	68.989	1.00	34.91
	ATOM	387	CA	GLN	118	30.722	42.648	69.719	1.00	35.11
	ATOM	388	CB	GLN	118	31.818	41.826	70.405	1.00	38.55
	ATOM	389	CG	GLN	118	31.278	40.731	71.319	1.00	44.24
	ATOM	390	CD	GLN	118	32.340	40.138	72.229	1.00	47.30
60	ATOM	391	OE1	GLN	118	33.397	39.702	71.771	1.00	49.53
	ATOM	392	NE2	GLN	118	32.060	40.115	73.528	1.00	47.80

	ATOM	393	C	GLN	118	31.352	43.714	68.831	1.00	32.85
	ATOM	394	O	GLN	118	31.371	44.895	69.188	1.00	31.35
	ATOM	395	N	ILE	119	31.869	43.308	67.676	1.00	29.57
	ATOM	396	CA	ILE	119	32.492	44.269	66.776	1.00	28.83
5	ATOM	397	CB	ILE	119	33.274	43.563	65.644	1.00	29.00
	ATOM	398	CG2	ILE	119	32.319	42.794	64.742	1.00	29.58
	ATOM	399	CG1	ILE	119	34.063	44.599	64.844	1.00	31.09
	ATOM	400	CD1	ILE	119	35.045	43.992	63.864	1.00	33.97
	ATOM	401	C	ILE	119	31.435	45.195	66.179	1.00	26.91
10	ATOM	402	O	ILE	119	31.709	46.358	65.872	1.00	25.48
	ATOM	403	N	ALA	120	30.220	44.683	66.024	1.00	25.38
	ATOM	404	CA	ALA	120	29.135	45.492	65.482	1.00	26.14
	ATOM	405	CB	ALA	120	27.918	44.623	65.202	1.00	24.25
	ATOM	406	C	ALA	120	28.790	46.568	66.509	1.00	25.83
15	ATOM	407	O	ALA	120	28.566	47.727	66.165	1.00	25.53
	ATOM	408	N	ASN	121	28.755	46.178	67.778	1.00	25.13
	ATOM	409	CA	ASN	121	28.443	47.131	68.834	1.00	25.64
	ATOM	410	CB	ASN	121	28.407	46.426	70.191	1.00	28.05
	ATOM	411	CG	ASN	121	27.945	47.341	71.304	1.00	33.48
20	ATOM	412	OD1	ASN	121	28.666	48.256	71.704	1.00	37.03
	ATOM	413	ND2	ASN	121	26.732	47.107	71.797	1.00	35.02
	ATOM	414	C	ASN	121	29.474	48.256	68.843	1.00	23.48
	ATOM	415	O	ASN	121	29.131	49.421	69.052	1.00	24.86
	ATOM	416	N	HIS	122	30.735	47.910	68.603	1.00	21.49
25	ATOM	417	CA	HIS	122	31.799	48.908	68.565	1.00	21.72
	ATOM	418	CB	HIS	122	33.171	48.227	68.499	1.00	21.96
	ATOM	419	CG	HIS	122	34.297	49.165	68.190	1.00	23.78
	ATOM	420	CD2	HIS	122	35.094	49.902	69.002	1.00	22.69
	ATOM	421	ND1	HIS	122	34.694	49.456	66.901	1.00	25.06
30	ATOM	422	CE1	HIS	122	35.684	50.330	66.934	1.00	24.61
	ATOM	423	NE2	HIS	122	35.946	50.618	68.197	1.00	22.29
	ATOM	424	C	HIS	122	31.624	49.822	67.354	1.00	22.77
	ATOM	425	O	HIS	122	31.801	51.041	67.445	1.00	21.87
	ATOM	426	N	THR	123	31.278	49.224	66.218	1.00	20.58
35	ATOM	427	CA	THR	123	31.083	49.979	64.987	1.00	21.80
	ATOM	428	CB	THR	123	30.823	49.034	63.795	1.00	22.75
	ATOM	429	OG1	THR	123	31.945	48.155	63.632	1.00	22.95
	ATOM	430	CG2	THR	123	30.618	49.832	62.509	1.00	23.24
	ATOM	431	C	THR	123	29.905	50.940	65.128	1.00	21.91
40	ATOM	432	O	THR	123	29.972	52.085	64.692	1.00	21.95
	ATOM	433	N	LEU	124	28.829	50.468	65.747	1.00	23.43
	ATOM	434	CA	LEU	124	27.643	51.291	65.945	1.00	24.99
	ATOM	435	CB	LEU	124	26.538	50.458	66.590	1.00	27.24
	ATOM	436	CG	LEU	124	25.215	51.170	66.870	1.00	29.20
45	ATOM	437	CD1	LEU	124	24.575	51.621	65.556	1.00	31.28
	ATOM	438	CD2	LEU	124	24.294	50.228	67.622	1.00	30.06
	ATOM	439	C	LEU	124	27.953	52.501	66.830	1.00	25.57
	ATOM	440	O	LEU	124	27.559	53.628	66.526	1.00	23.70
	ATOM	441	N	LYS	125	28.664	52.256	67.924	1.00	24.93
50	ATOM	442	CA	LYS	125	29.018	53.316	68.855	1.00	26.17
	ATOM	443	CB	LYS	125	29.818	52.747	70.026	1.00	27.56
	ATOM	444	CG	LYS	125	30.174	53.788	71.072	1.00	32.44
	ATOM	445	CD	LYS	125	31.157	53.249	72.093	1.00	34.92
	ATOM	446	CE	LYS	125	31.464	54.302	73.144	1.00	38.23
55	ATOM	447	NZ	LYS	125	31.907	55.587	72.522	1.00	40.02
	ATOM	448	C	LYS	125	29.830	54.422	68.192	1.00	25.74
	ATOM	449	O	LYS	125	29.455	55.593	68.244	1.00	25.50
	ATOM	450	N	TYR	126	30.948	54.053	67.575	1.00	23.64
	ATOM	451	CA	TYR	126	31.793	55.044	66.930	1.00	23.63
60	ATOM	452	CB	TYR	126	33.193	54.477	66.688	1.00	23.98
	ATOM	453	CG	TYR	126	34.005	54.436	67.961	1.00	24.33

	ATOM	454	CD1	TYR	126	33.877	53.380	68.865	1.00	24.10
	ATOM	455	CE1	TYR	126	34.539	53.401	70.094	1.00	24.70
	ATOM	456	CD2	TYR	126	34.822	55.509	68.314	1.00	25.19
	ATOM	457	CE2	TYR	126	35.484	55.540	69.534	1.00	25.45
5	ATOM	458	CZ	TYR	126	35.337	54.489	70.420	1.00	24.76
	ATOM	459	OH	TYR	126	35.971	54.545	71.640	1.00	26.84
	ATOM	460	C	TYR	126	31.199	55.594	65.644	1.00	23.81
	ATOM	461	O	TYR	126	31.426	56.756	65.303	1.00	24.01
	ATOM	462	N	GLY	127	30.426	54.764	64.945	1.00	23.08
10	ATOM	463	CA	GLY	127	29.791	55.198	63.713	1.00	22.50
	ATOM	464	C	GLY	127	28.741	56.255	63.994	1.00	23.32
	ATOM	465	O	GLY	127	28.616	57.237	63.259	1.00	21.48
	ATOM	466	N	THR	128	27.981	56.050	65.066	1.00	24.15
	ATOM	467	CA	THR	128	26.945	56.996	65.468	1.00	25.03
15	ATOM	468	CB	THR	128	26.166	56.474	66.687	1.00	24.73
	ATOM	469	OG1	THR	128	25.558	55.221	66.357	1.00	25.50
	ATOM	470	CG2	THR	128	25.088	57.468	67.103	1.00	23.72
	ATOM	471	C	THR	128	27.601	58.332	65.821	1.00	25.94
	ATOM	472	O	THR	128	27.138	59.390	65.397	1.00	26.44
20	ATOM	473	N	GLN	129	28.680	58.275	66.597	1.00	27.23
	ATOM	474	CA	GLN	129	29.408	59.481	66.980	1.00	28.25
	ATOM	475	CB	GLN	129	30.587	59.138	67.901	1.00	32.26
	ATOM	476	CG	GLN	129	30.285	59.178	69.396	1.00	38.49
	ATOM	477	CD	GLN	129	31.487	58.779	70.249	1.00	42.52
25	ATOM	478	OE1	GLN	129	31.786	57.594	70.412	1.00	44.86
	ATOM	479	NE2	GLN	129	32.187	59.772	70.787	1.00	45.22
	ATOM	480	C	GLN	129	29.943	60.182	65.737	1.00	27.53
	ATOM	481	O	GLN	129	29.824	61.399	65.601	1.00	26.41
	ATOM	482	N	ALA	130	30.531	59.405	64.831	1.00	25.80
30	ATOM	483	CA	ALA	130	31.104	59.944	63.600	1.00	24.69
	ATOM	484	CB	ALA	130	31.699	58.810	62.766	1.00	25.45
	ATOM	485	C	ALA	130	30.100	60.729	62.757	1.00	25.28
	ATOM	486	O	ALA	130	30.448	61.739	62.141	1.00	24.63
	ATOM	487	N	ARG	131	28.860	60.256	62.723	1.00	24.09
35	ATOM	488	CA	ARG	131	27.819	60.908	61.945	1.00	26.32
	ATOM	489	CB	ARG	131	26.600	59.994	61.836	1.00	25.28
	ATOM	490	CG	ARG	131	26.859	58.750	61.015	1.00	26.20
	ATOM	491	CD	ARG	131	25.613	57.904	60.897	1.00	26.32
	ATOM	492	NE	ARG	131	25.805	56.792	59.972	1.00	25.16
40	ATOM	493	CZ	ARG	131	24.853	55.925	59.648	1.00	26.49
	ATOM	494	NH1	ARG	131	23.640	56.041	60.180	1.00	25.08
	ATOM	495	NH2	ARG	131	25.108	54.953	58.780	1.00	27.31
	ATOM	496	C	ARG	131	27.398	62.254	62.519	1.00	27.69
	ATOM	497	O	ARG	131	26.722	63.033	61.848	1.00	27.22
45	ATOM	498	N	LYS	132	27.792	62.524	63.758	1.00	28.78
	ATOM	499	CA	LYS	132	27.444	63.785	64.397	1.00	31.07
	ATOM	500	CB	LYS	132	27.480	63.629	65.920	1.00	32.98
	ATOM	501	CG	LYS	132	26.404	62.682	66.437	1.00	37.31
	ATOM	502	CD	LYS	132	26.517	62.422	67.931	1.00	40.01
50	ATOM	503	CE	LYS	132	25.419	61.469	68.386	1.00	42.18
	ATOM	504	NZ	LYS	132	25.551	61.088	69.821	1.00	44.23
	ATOM	505	C	LYS	132	28.371	64.906	63.946	1.00	30.99
	ATOM	506	O	LYS	132	28.104	66.082	64.194	1.00	30.45
	ATOM	507	N	PHE	133	29.461	64.543	63.278	1.00	31.38
55	ATOM	508	CA	PHE	133	30.401	65.542	62.776	1.00	32.92
	ATOM	509	CB	PHE	133	31.825	64.980	62.665	1.00	32.55
	ATOM	510	CG	PHE	133	32.531	64.825	63.977	1.00	32.74
	ATOM	511	CD1	PHE	133	32.357	63.682	64.746	1.00	33.65
	ATOM	512	CD2	PHE	133	33.376	65.828	64.444	1.00	34.44
60	ATOM	513	CE1	PHE	133	33.017	63.535	65.965	1.00	35.01
	ATOM	514	CE2	PHE	133	34.041	65.695	65.664	1.00	34.23

	ATOM	515	CZ	PHE	133	33.861	64.546	66.425	1.00	35.80
	ATOM	516	C	PHE	133	29.970	65.978	61.390	1.00	33.66
	ATOM	517	O	PHE	133	29.487	65.165	60.601	1.00	33.46
	ATOM	518	N	ASP	134	30.136	67.262	61.095	1.00	34.13
5	ATOM	519	CA	ASP	134	29.804	67.769	59.772	1.00	34.82
	ATOM	520	CB	ASP	134	29.286	69.209	59.836	1.00	35.44
	ATOM	521	CG	ASP	134	28.831	69.724	58.477	1.00	35.56
	ATOM	522	OD1	ASP	134	29.439	69.336	57.459	1.00	36.13
	ATOM	523	OD2	ASP	134	27.873	70.522	58.425	1.00	36.65
10	ATOM	524	C	ASP	134	31.121	67.737	59.014	1.00	34.27
	ATOM	525	O	ASP	134	31.909	68.677	59.089	1.00	34.87
	ATOM	526	N	VAL	135	31.361	66.644	58.298	1.00	35.15
	ATOM	527	CA	VAL	135	32.595	66.478	57.540	1.00	35.95
	ATOM	528	CB	VAL	135	32.530	65.218	56.657	1.00	36.58
15	ATOM	529	CG1	VAL	135	33.794	65.095	55.833	1.00	37.87
	ATOM	530	CG2	VAL	135	32.355	63.988	57.530	1.00	36.85
	ATOM	531	C	VAL	135	32.915	67.682	56.660	1.00	36.83
	ATOM	532	O	VAL	135	34.084	67.983	56.415	1.00	36.31
	ATOM	533	N	ASN	136	31.880	68.371	56.189	1.00	37.34
20	ATOM	534	CA	ASN	136	32.077	69.540	55.340	1.00	39.98
	ATOM	535	CB	ASN	136	30.729	70.105	54.873	1.00	39.64
	ATOM	536	CG	ASN	136	29.961	69.138	53.996	1.00	40.40
	ATOM	537	OD1	ASN	136	30.488	68.633	53.004	1.00	39.43
	ATOM	538	ND2	ASN	136	28.703	68.879	54.354	1.00	39.64
25	ATOM	539	C	ASN	136	32.851	70.639	56.061	1.00	41.21
	ATOM	540	O	ASN	136	33.593	71.396	55.437	1.00	42.44
	ATOM	541	N	GLN	137	32.684	70.716	57.377	1.00	42.26
	ATOM	542	CA	GLN	137	33.354	71.741	58.173	1.00	43.46
	ATOM	543	CB	GLN	137	32.486	72.104	59.381	1.00	44.53
30	ATOM	544	CG	GLN	137	31.077	72.557	59.023	1.00	47.29
	ATOM	545	CD	GLN	137	31.064	73.786	58.130	1.00	49.81
	ATOM	546	OE1	GLN	137	31.620	74.830	58.480	1.00	51.43
	ATOM	547	NE2	GLN	137	30.424	73.668	56.971	1.00	50.55
	ATOM	548	C	GLN	137	34.755	71.355	58.648	1.00	43.13
35	ATOM	549	O	GLN	137	35.518	72.209	59.101	1.00	42.91
	ATOM	550	N	LEU	138	35.096	70.074	58.549	1.00	43.61
	ATOM	551	CA	LEU	138	36.411	69.608	58.983	1.00	43.43
	ATOM	552	CB	LEU	138	36.432	68.078	59.043	1.00	43.64
	ATOM	553	CG	LEU	138	36.358	67.475	60.451	1.00	44.21
40	ATOM	554	CD1	LEU	138	35.308	68.189	61.286	1.00	44.64
	ATOM	555	CD2	LEU	138	36.049	65.994	60.349	1.00	44.83
	ATOM	556	C	LEU	138	37.530	70.124	58.087	1.00	43.49
	ATOM	557	O	LEU	138	37.443	70.055	56.862	1.00	43.96
	ATOM	558	N	GLN	139	38.585	70.635	58.716	1.00	43.92
45	ATOM	559	CA	GLN	139	39.729	71.199	58.005	1.00	44.02
	ATOM	560	CB	GLN	139	40.392	72.275	58.867	1.00	46.53
	ATOM	561	CG	GLN	139	40.683	73.572	58.137	1.00	49.82
	ATOM	562	CD	GLN	139	39.418	74.318	57.762	1.00	52.02
	ATOM	563	OE1	GLN	139	38.581	73.813	57.012	1.00	53.40
50	ATOM	564	NE2	GLN	139	39.269	75.530	58.288	1.00	53.64
	ATOM	565	C	GLN	139	40.778	70.167	57.603	1.00	43.28
	ATOM	566	O	GLN	139	41.149	70.075	56.434	1.00	44.53
	ATOM	567	N	ASN	140	41.268	69.403	58.575	1.00	41.60
	ATOM	568	CA	ASN	140	42.280	68.385	58.307	1.00	39.70
55	ATOM	569	CB	ASN	140	42.721	67.719	59.614	1.00	38.65
	ATOM	570	CG	ASN	140	43.904	66.782	59.425	1.00	38.74
	ATOM	571	OD1	ASN	140	43.860	65.877	58.587	1.00	39.03
	ATOM	572	ND2	ASN	140	44.959	67.007	60.208	1.00	38.01
	ATOM	573	C	ASN	140	41.715	67.336	57.353	1.00	39.03
60	ATOM	574	O	ASN	140	40.752	66.640	57.682	1.00	37.85
	ATOM	575	N	THR	141	42.319	67.222	56.175	1.00	38.84

	ATOM	576	CA	THR	141	41.862	66.265	55.175	1.00	39.36
	ATOM	577	CB	THR	141	42.689	66.377	53.878	1.00	40.12
	ATOM	578	OG1	THR	141	44.072	66.148	54.168	1.00	42.67
	ATOM	579	CG2	THR	141	42.527	67.761	53.263	1.00	40.55
5	ATOM	580	C	THR	141	41.910	64.820	55.673	1.00	38.70
	ATOM	581	O	THR	141	40.965	64.060	55.469	1.00	39.63
	ATOM	582	N	THR	142	43.003	64.442	56.327	1.00	37.88
	ATOM	583	CA	THR	142	43.141	63.082	56.843	1.00	36.04
	ATOM	584	CB	THR	142	44.516	62.870	57.509	1.00	36.83
10	ATOM	585	OG1	THR	142	45.547	63.012	56.524	1.00	36.96
	ATOM	586	CG2	THR	142	44.605	61.481	58.126	1.00	37.59
	ATOM	587	C	THR	142	42.045	62.770	57.857	1.00	35.01
	ATOM	588	O	THR	142	41.465	61.686	57.836	1.00	34.20
	ATOM	589	N	ILE	143	41.770	63.719	58.747	1.00	33.02
15	ATOM	590	CA	ILE	143	40.728	63.538	59.754	1.00	32.35
	ATOM	591	CB	ILE	143	40.706	64.721	60.754	1.00	33.52
	ATOM	592	CG2	ILE	143	39.488	64.620	61.664	1.00	31.47
	ATOM	593	CG1	ILE	143	42.000	64.736	61.573	1.00	33.85
	ATOM	594	CD1	ILE	143	42.192	63.512	62.442	1.00	36.23
20	ATOM	595	C	ILE	143	39.379	63.467	59.048	1.00	31.17
	ATOM	596	O	ILE	143	38.503	62.679	59.413	1.00	29.34
	ATOM	597	N	LYS	144	39.231	64.306	58.028	1.00	30.98
	ATOM	598	CA	LYS	144	38.016	64.386	57.228	1.00	30.73
	ATOM	599	CB	LYS	144	38.208	65.462	56.153	1.00	33.49
25	ATOM	600	CG	LYS	144	36.993	65.776	55.306	1.00	37.03
	ATOM	601	CD	LYS	144	37.360	66.779	54.219	1.00	40.12
	ATOM	602	CE	LYS	144	36.174	67.118	53.325	1.00	42.45
	ATOM	603	NZ	LYS	144	35.112	67.865	54.051	1.00	43.36
	ATOM	604	C	LYS	144	37.712	63.034	56.574	1.00	28.35
30	ATOM	605	O	LYS	144	36.590	62.526	56.645	1.00	27.74
	ATOM	606	N	ARG	145	38.734	62.459	55.951	1.00	26.86
	ATOM	607	CA	ARG	145	38.631	61.179	55.254	1.00	24.41
	ATOM	608	CB	ARG	145	39.943	60.913	54.512	1.00	24.91
	ATOM	609	CG	ARG	145	39.934	59.733	53.549	1.00	23.83
35	ATOM	610	CD	ARG	145	41.194	59.763	52.692	1.00	24.48
	ATOM	611	NE	ARG	145	41.334	58.608	51.806	1.00	23.26
	ATOM	612	CZ	ARG	145	40.576	58.376	50.738	1.00	25.83
	ATOM	613	NH1	ARG	145	39.606	59.221	50.410	1.00	23.61
	ATOM	614	NH2	ARG	145	40.796	57.300	49.988	1.00	23.06
40	ATOM	615	C	ARG	145	38.302	60.009	56.187	1.00	24.55
	ATOM	616	O	ARG	145	37.457	59.168	55.871	1.00	22.27
	ATOM	617	N	ILE	146	38.971	59.949	57.333	1.00	23.82
	ATOM	618	CA	ILE	146	38.720	58.876	58.288	1.00	24.41
	ATOM	619	CB	ILE	146	39.720	58.935	59.468	1.00	25.21
45	ATOM	620	CG2	ILE	146	39.251	58.033	60.600	1.00	22.70
	ATOM	621	CG1	ILE	146	41.113	58.519	58.979	1.00	25.19
	ATOM	622	CD1	ILE	146	42.202	58.625	60.028	1.00	26.27
	ATOM	623	C	ILE	146	37.296	58.932	58.838	1.00	24.39
	ATOM	624	O	ILE	146	36.591	57.922	58.858	1.00	24.78
50	ATOM	625	N	ILE	147	36.874	60.116	59.274	1.00	23.99
	ATOM	626	CA	ILE	147	35.539	60.283	59.832	1.00	24.23
	ATOM	627	CB	ILE	147	35.337	61.724	60.381	1.00	24.80
	ATOM	628	CG2	ILE	147	33.871	61.960	60.733	1.00	25.96
	ATOM	629	CG1	ILE	147	36.219	61.924	61.622	1.00	25.41
55	ATOM	630	CD1	ILE	147	36.029	63.261	62.324	1.00	25.15
	ATOM	631	C	ILE	147	34.441	59.947	58.822	1.00	23.88
	ATOM	632	O	ILE	147	33.459	59.293	59.168	1.00	22.19
	ATOM	633	N	ALA	148	34.603	60.392	57.579	1.00	25.35
	ATOM	634	CA	ALA	148	33.610	60.099	56.549	1.00	26.35
60	ATOM	635	CB	ALA	148	34.041	60.704	55.206	1.00	26.72
	ATOM	636	C	ALA	148	33.470	58.584	56.424	1.00	26.20

	ATOM	637	O	ALA	148	32.366	58.055	56.296	1.00	26.64
	ATOM	638	N	LYS	149	34.604	57.892	56.476	1.00	26.33
	ATOM	639	CA	LYS	149	34.632	56.439	56.372	1.00	25.57
	ATOM	640	CB	LYS	149	36.080	55.970	56.205	1.00	28.20
5	ATOM	641	CG	LYS	149	36.244	54.497	55.885	1.00	32.16
	ATOM	642	CD	LYS	149	37.640	54.228	55.333	1.00	36.26
	ATOM	643	CE	LYS	149	37.815	52.773	54.930	1.00	37.26
	ATOM	644	NZ	LYS	149	37.763	51.868	56.105	1.00	39.38
	ATOM	645	C	LYS	149	33.989	55.754	57.581	1.00	24.69
10	ATOM	646	O	LYS	149	33.302	54.739	57.435	1.00	24.36
	ATOM	647	N	VAL	150	34.205	56.307	58.772	1.00	22.37
	ATOM	648	CA	VAL	150	33.632	55.727	59.981	1.00	22.59
	ATOM	649	CB	VAL	150	34.270	56.341	61.254	1.00	23.63
	ATOM	650	CG1	VAL	150	33.651	55.723	62.502	1.00	20.79
15	ATOM	651	CG2	VAL	150	35.776	56.099	61.243	1.00	22.23
	ATOM	652	C	VAL	150	32.111	55.899	60.035	1.00	21.68
	ATOM	653	O	VAL	150	31.426	55.151	60.730	1.00	21.12
	ATOM	654	N	GLN	151	31.581	56.871	59.294	1.00	20.83
	ATOM	655	CA	GLN	151	30.133	57.097	59.267	1.00	21.36
20	ATOM	656	CB	GLN	151	29.804	58.423	58.566	1.00	21.83
	ATOM	657	CG	GLN	151	30.424	59.658	59.216	1.00	22.21
	ATOM	658	CD	GLN	151	30.025	60.949	58.514	1.00	26.18
	ATOM	659	OE1	GLN	151	29.786	60.960	57.306	1.00	26.64
	ATOM	660	NE2	GLN	151	29.969	62.046	59.266	1.00	23.87
25	ATOM	661	C	GLN	151	29.405	55.948	58.555	1.00	21.63
	ATOM	662	O	GLN	151	28.178	55.831	58.637	1.00	21.51
	ATOM	663	N	ASP	152	30.162	55.111	57.848	1.00	19.66
	ATOM	664	CA	ASP	152	29.596	53.958	57.141	1.00	21.29
	ATOM	665	CB	ASP	152	30.413	53.657	55.875	1.00	19.46
30	ATOM	666	CG	ASP	152	29.783	52.574	55.004	1.00	21.81
	ATOM	667	OD1	ASP	152	29.034	51.724	55.528	1.00	21.84
	ATOM	668	OD2	ASP	152	30.056	52.563	53.784	1.00	22.86
	ATOM	669	C	ASP	152	29.690	52.781	58.109	1.00	20.99
	ATOM	670	O	ASP	152	30.772	52.240	58.323	1.00	20.95
35	ATOM	671	N	LEU	153	28.558	52.386	58.688	1.00	22.58
	ATOM	672	CA	LEU	153	28.535	51.292	59.661	1.00	22.39
	ATOM	673	CB	LEU	153	27.330	51.433	60.593	1.00	22.04
	ATOM	674	CG	LEU	153	26.824	52.837	60.927	1.00	25.61
	ATOM	675	CD1	LEU	153	25.697	52.735	61.951	1.00	25.99
40	ATOM	676	CD2	LEU	153	27.956	53.680	61.460	1.00	22.76
	ATOM	677	C	LEU	153	28.460	49.919	59.013	1.00	22.78
	ATOM	678	O	LEU	153	28.512	48.902	59.704	1.00	21.91
	ATOM	679	N	GLU	154	28.341	49.894	57.691	1.00	22.03
	ATOM	680	CA	GLU	154	28.202	48.644	56.965	1.00	23.75
45	ATOM	681	CB	GLU	154	29.540	47.902	56.894	1.00	26.94
	ATOM	682	CG	GLU	154	30.179	48.049	55.508	1.00	34.66
	ATOM	683	CD	GLU	154	31.604	48.553	55.547	1.00	38.29
	ATOM	684	OE1	GLU	154	32.505	47.776	55.938	1.00	41.36
	ATOM	685	OE2	GLU	154	31.825	49.729	55.185	1.00	42.09
50	ATOM	686	C	GLU	154	27.103	47.792	57.603	1.00	21.61
	ATOM	687	O	GLU	154	26.055	48.324	57.952	1.00	22.87
	ATOM	688	N	ARG	155	27.323	46.493	57.773	1.00	20.09
	ATOM	689	CA	ARG	155	26.275	45.646	58.340	1.00	21.46
	ATOM	690	CB	ARG	155	26.742	44.192	58.430	1.00	20.77
55	ATOM	691	CG	ARG	155	27.718	43.918	59.551	1.00	19.96
	ATOM	692	CD	ARG	155	28.186	42.480	59.509	1.00	23.32
	ATOM	693	NE	ARG	155	28.950	42.205	58.299	1.00	25.43
	ATOM	694	CZ	ARG	155	29.456	41.017	57.994	1.00	29.86
	ATOM	695	NH1	ARG	155	29.274	39.987	58.814	1.00	28.71
60	ATOM	696	NH2	ARG	155	30.152	40.858	56.873	1.00	31.49
	ATOM	697	C	ARG	155	25.784	46.105	59.712	1.00	21.73

	ATOM	698	O	ARG	155	24.638	45.846	60.084	1.00	21.61
	ATOM	699	N	ALA	156	26.645	46.787	60.461	1.00	21.87
	ATOM	700	CA	ALA	156	26.270	47.264	61.789	1.00	24.11
	ATOM	701	CB	ALA	156	27.478	47.878	62.490	1.00	24.00
5	ATOM	702	C	ALA	156	25.117	48.270	61.749	1.00	24.29
	ATOM	703	O	ALA	156	24.566	48.620	62.788	1.00	24.68
	ATOM	704	N	ALA	157	24.748	48.735	60.557	1.00	22.56
	ATOM	705	CA	ALA	157	23.642	49.684	60.447	1.00	22.76
	ATOM	706	CB	ALA	157	23.721	50.438	59.125	1.00	21.66
10	ATOM	707	C	ALA	157	22.297	48.966	60.554	1.00	22.55
	ATOM	708	O	ALA	157	21.258	49.598	60.749	1.00	23.01
	ATOM	709	N	LEU	158	22.322	47.642	60.429	1.00	22.24
	ATOM	710	CA	LEU	158	21.103	46.834	60.490	1.00	21.40
	ATOM	711	CB	LEU	158	21.365	45.441	59.912	1.00	19.45
15	ATOM	712	CG	LEU	158	21.629	45.249	58.418	1.00	16.15
	ATOM	713	CD1	LEU	158	22.085	43.821	58.168	1.00	18.41
	ATOM	714	CD2	LEU	158	20.357	45.554	57.632	1.00	14.90
	ATOM	715	C	LEU	158	20.542	46.655	61.900	1.00	22.60
	ATOM	716	O	LEU	158	21.296	46.550	62.861	1.00	21.61
20	ATOM	717	N	PRO	159	19.202	46.616	62.033	1.00	23.33
	ATOM	718	CD	PRO	159	18.180	46.863	60.999	1.00	22.87
	ATOM	719	CA	PRO	159	18.582	46.430	63.348	1.00	24.44
	ATOM	720	CB	PRO	159	17.096	46.342	63.017	1.00	23.93
	ATOM	721	CG	PRO	159	16.970	47.241	61.824	1.00	24.99
25	ATOM	722	C	PRO	159	19.122	45.111	63.897	1.00	25.67
	ATOM	723	O	PRO	159	19.384	44.182	63.128	1.00	24.90
	ATOM	724	N	ALA	160	19.289	45.035	65.213	1.00	25.35
	ATOM	725	CA	ALA	160	19.818	43.841	65.866	1.00	26.14
	ATOM	726	CB	ALA	160	19.536	43.909	67.366	1.00	26.95
30	ATOM	727	C	ALA	160	19.296	42.516	65.303	1.00	26.55
	ATOM	728	O	ALA	160	20.071	41.584	65.078	1.00	23.79
	ATOM	729	N	GLN	161	17.989	42.431	65.077	1.00	26.32
	ATOM	730	CA	GLN	161	17.397	41.201	64.563	1.00	29.37
	ATOM	731	CB	GLN	161	15.871	41.313	64.542	1.00	31.38
35	ATOM	732	CG	GLN	161	15.167	40.022	64.158	1.00	37.44
	ATOM	733	CD	GLN	161	13.656	40.124	64.267	1.00	41.02
	ATOM	734	OE1	GLN	161	13.114	40.363	65.349	1.00	43.87
	ATOM	735	NE2	GLN	161	12.967	39.947	63.144	1.00	43.01
	ATOM	736	C	GLN	161	17.909	40.844	63.169	1.00	28.25
40	ATOM	737	O	GLN	161	18.313	39.705	62.922	1.00	27.07
	ATOM	738	N	GLU	162	17.884	41.815	62.262	1.00	27.58
	ATOM	739	CA	GLU	162	18.353	41.595	60.898	1.00	28.12
	ATOM	740	CB	GLU	162	18.056	42.812	60.014	1.00	30.05
	ATOM	741	CG	GLU	162	16.648	42.872	59.439	1.00	36.16
45	ATOM	742	CD	GLU	162	15.596	43.218	60.474	1.00	40.46
	ATOM	743	OE1	GLU	162	15.349	42.396	61.383	1.00	43.71
	ATOM	744	OE2	GLU	162	15.015	44.320	60.376	1.00	42.20
	ATOM	745	C	GLU	162	19.852	41.319	60.875	1.00	25.64
	ATOM	746	O	GLU	162	20.338	40.564	60.036	1.00	24.67
50	ATOM	747	N	LEU	163	20.583	41.933	61.798	1.00	23.77
	ATOM	748	CA	LEU	163	22.027	41.741	61.856	1.00	23.77
	ATOM	749	CB	LEU	163	22.658	42.686	62.886	1.00	23.27
	ATOM	750	CG	LEU	163	24.167	42.535	63.139	1.00	22.82
	ATOM	751	CD1	LEU	163	24.947	42.725	61.843	1.00	24.01
55	ATOM	752	CD2	LEU	163	24.614	43.548	64.179	1.00	23.32
	ATOM	753	C	LEU	163	22.382	40.299	62.192	1.00	24.03
	ATOM	754	O	LEU	163	23.248	39.700	61.546	1.00	23.44
	ATOM	755	N	GLU	164	21.717	39.728	63.192	1.00	23.75
	ATOM	756	CA	GLU	164	22.031	38.356	63.562	1.00	25.00
60	ATOM	757	CB	GLU	164	21.362	37.974	64.893	1.00	28.77
	ATOM	758	CG	GLU	164	19.950	37.445	64.807	1.00	35.39

	ATOM	759	CD	GLU	164	19.405	37.035	66.171	1.00	40.22
	ATOM	760	OE1	GLU	164	18.302	36.450	66.224	1.00	41.83
	ATOM	761	OE2	GLU	164	20.080	37.303	67.193	1.00	41.78
	ATOM	762	C	GLU	164	21.628	37.401	62.445	1.00	23.01
5	ATOM	763	O	GLU	164	22.319	36.414	62.185	1.00	22.51
	ATOM	764	N	GLU	165	20.524	37.703	61.768	1.00	22.62
	ATOM	765	CA	GLU	165	20.073	36.857	60.670	1.00	24.34
	ATOM	766	CB	GLU	165	18.669	37.265	60.209	1.00	24.26
	ATOM	767	CG	GLU	165	18.195	36.512	58.973	1.00	26.97
10	ATOM	768	CD	GLU	165	16.781	36.876	58.560	1.00	28.34
	ATOM	769	OE1	GLU	165	16.329	37.996	58.886	1.00	28.72
	ATOM	770	OE2	GLU	165	16.127	36.045	57.893	1.00	28.15
	ATOM	771	C	GLU	165	21.065	36.968	59.509	1.00	24.93
	ATOM	772	O	GLU	165	21.395	35.967	58.865	1.00	24.77
15	ATOM	773	N	TYR	166	21.552	38.181	59.260	1.00	23.07
	ATOM	774	CA	TYR	166	22.514	38.402	58.188	1.00	23.12
	ATOM	775	CB	TYR	166	22.764	39.903	57.993	1.00	21.91
	ATOM	776	CG	TYR	166	23.736	40.235	56.875	1.00	21.83
	ATOM	777	CD1	TYR	166	23.502	39.807	55.568	1.00	22.95
20	ATOM	778	CE1	TYR	166	24.390	40.119	54.532	1.00	22.34
	ATOM	779	CD2	TYR	166	24.886	40.985	57.125	1.00	21.46
	ATOM	780	CE2	TYR	166	25.780	41.301	56.102	1.00	22.52
	ATOM	781	CZ	TYR	166	25.526	40.865	54.808	1.00	23.28
	ATOM	782	OH	TYR	166	26.403	41.176	53.795	1.00	23.78
25	ATOM	783	C	TYR	166	23.831	37.687	58.503	1.00	23.03
	ATOM	784	O	TYR	166	24.412	37.040	57.633	1.00	23.00
	ATOM	785	N	ASN	167	24.302	37.794	59.743	1.00	22.34
	ATOM	786	CA	ASN	167	25.551	37.129	60.112	1.00	22.66
	ATOM	787	CB	ASN	167	25.979	37.493	61.539	1.00	23.67
30	ATOM	788	CG	ASN	167	26.499	38.915	61.649	1.00	24.93
	ATOM	789	OD1	ASN	167	27.226	39.393	60.777	1.00	26.06
	ATOM	790	ND2	ASN	167	26.140	39.594	62.731	1.00	25.88
	ATOM	791	C	ASN	167	25.430	35.616	59.994	1.00	22.26
	ATOM	792	O	ASN	167	26.363	34.950	59.552	1.00	21.60
35	ATOM	793	N	LYS	168	24.280	35.073	60.382	1.00	20.98
	ATOM	794	CA	LYS	168	24.079	33.632	60.307	1.00	21.98
	ATOM	795	CB	LYS	168	22.809	33.214	61.055	1.00	23.33
	ATOM	796	CG	LYS	168	22.528	31.729	60.936	1.00	27.37
	ATOM	797	CD	LYS	168	21.405	31.270	61.844	1.00	32.52
40	ATOM	798	CE	LYS	168	21.082	29.808	61.567	1.00	35.29
	ATOM	799	NZ	LYS	168	22.320	28.969	61.554	1.00	35.98
	ATOM	800	C	LYS	168	24.006	33.159	58.860	1.00	20.98
	ATOM	801	O	LYS	168	24.509	32.085	58.525	1.00	20.06
	ATOM	802	N	ILE	169	23.374	33.959	58.007	1.00	19.85
45	ATOM	803	CA	ILE	169	23.260	33.615	56.595	1.00	21.24
	ATOM	804	CB	ILE	169	22.368	34.631	55.846	1.00	21.43
	ATOM	805	CG2	ILE	169	22.611	34.554	54.338	1.00	23.74
	ATOM	806	CG1	ILE	169	20.900	34.340	56.159	1.00	24.06
	ATOM	807	CD1	ILE	169	19.930	35.302	55.515	1.00	24.63
50	ATOM	808	C	ILE	169	24.643	33.554	55.944	1.00	19.54
	ATOM	809	O	ILE	169	24.936	32.632	55.188	1.00	21.81
	ATOM	810	N	LEU	170	25.491	34.530	56.244	1.00	19.05
	ATOM	811	CA	LEU	170	26.837	34.562	55.687	1.00	19.74
	ATOM	812	CB	LEU	170	27.565	35.834	56.131	1.00	19.37
55	ATOM	813	CG	LEU	170	27.041	37.157	55.559	1.00	21.50
	ATOM	814	CD1	LEU	170	27.810	38.328	56.170	1.00	20.18
	ATOM	815	CD2	LEU	170	27.188	37.151	54.044	1.00	19.99
	ATOM	816	C	LEU	170	27.620	33.332	56.140	1.00	21.61
	ATOM	817	O	LEU	170	28.300	32.682	55.344	1.00	21.28
60	ATOM	818	N	LEU	171	27.511	33.009	57.423	1.00	21.65
	ATOM	819	CA	LEU	171	28.217	31.862	57.969	1.00	23.32

	ATOM	820	CB	LEU	171	28.042	31.811	60.490	1.00	25.33
	ATOM	821	CG	LEU	171	28.968	30.869	60.262	1.00	28.92
	ATOM	822	CD1	LEU	171	30.414	31.241	59.990	1.00	30.99
	ATOM	823	CD2	LEU	171	28.681	30.977	61.756	1.00	32.45
5	ATOM	824	C	LEU	171	27.714	30.569	57.337	1.00	22.19
	ATOM	825	O	LEU	171	28.511	29.705	56.975	1.00	22.62
	ATOM	826	N	ASP	172	26.396	30.439	57.202	1.00	20.90
	ATOM	827	CA	ASP	172	25.817	29.237	56.615	1.00	21.82
	ATOM	828	CB	ASP	172	24.283	29.261	56.698	1.00	22.55
10	ATOM	829	CG	ASP	172	23.766	29.076	58.121	1.00	24.93
	ATOM	830	OD1	ASP	172	24.489	28.493	58.952	1.00	24.24
	ATOM	831	OD2	ASP	172	22.625	29.502	58.404	1.00	26.64
	ATOM	832	C	ASP	172	26.244	29.060	55.161	1.00	22.04
	ATOM	833	O	ASP	172	26.501	27.940	54.720	1.00	21.02
15	ATOM	834	N	MET	173	26.315	30.156	54.411	1.00	20.30
	ATOM	835	CA	MET	173	26.731	30.057	53.014	1.00	20.02
	ATOM	836	CB	MET	173	26.524	31.389	52.277	1.00	16.36
	ATOM	837	CG	MET	173	25.055	31.743	52.047	1.00	14.73
	ATOM	838	SD	MET	173	24.812	32.982	50.748	1.00	18.57
20	ATOM	839	CE	MET	173	25.587	34.426	51.501	1.00	15.06
	ATOM	840	C	MET	173	28.195	29.639	52.925	1.00	19.90
	ATOM	841	O	MET	173	28.560	28.773	52.129	1.00	18.15
	ATOM	842	N	GLU	174	29.033	30.251	53.751	1.00	21.27
	ATOM	843	CA	GLU	174	30.452	29.931	53.745	1.00	24.34
25	ATOM	844	CB	GLU	174	31.209	30.830	54.719	1.00	26.33
	ATOM	845	CG	GLU	174	32.700	30.567	54.706	1.00	31.24
	ATOM	846	CD	GLU	174	33.296	30.741	53.321	1.00	34.04
	ATOM	847	OE1	GLU	174	33.424	31.900	52.874	1.00	33.83
	ATOM	848	OE2	GLU	174	33.624	29.716	52.678	1.00	34.64
30	ATOM	849	C	GLU	174	30.686	28.477	54.122	1.00	23.73
	ATOM	850	O	GLU	174	31.454	27.768	53.464	1.00	23.77
	ATOM	851	N	THR	175	30.024	28.037	55.187	1.00	22.79
	ATOM	852	CA	THR	175	30.166	26.664	55.650	1.00	23.63
	ATOM	853	CB	THR	175	29.363	26.425	56.941	1.00	23.79
35	ATOM	854	OG1	THR	175	29.850	27.294	57.971	1.00	23.95
	ATOM	855	CG2	THR	175	29.502	24.973	57.391	1.00	23.49
	ATOM	856	C	THR	175	29.693	25.671	54.593	1.00	22.90
	ATOM	857	O	THR	175	30.391	24.701	54.279	1.00	24.74
	ATOM	858	N	THR	176	28.507	25.917	54.050	1.00	19.50
40	ATOM	859	CA	THR	176	27.937	25.052	53.025	1.00	21.93
	ATOM	860	CB	THR	176	26.605	25.616	52.494	1.00	21.32
	ATOM	861	OG1	THR	176	25.646	25.661	53.559	1.00	22.38
	ATOM	862	CG2	THR	176	26.068	24.740	51.358	1.00	20.84
	ATOM	863	C	THR	176	28.884	24.870	51.842	1.00	21.08
45	ATOM	864	O	THR	176	29.060	23.761	51.342	1.00	22.40
	ATOM	865	N	TYR	177	29.492	25.963	51.395	1.00	20.72
	ATOM	866	CA	TYR	177	30.406	25.906	50.260	1.00	19.26
	ATOM	867	CB	TYR	177	30.784	27.327	49.816	1.00	18.41
	ATOM	868	CG	TYR	177	31.707	27.374	48.610	1.00	18.79
50	ATOM	869	CD1	TYR	177	31.196	27.356	47.311	1.00	16.82
	ATOM	870	CE1	TYR	177	32.044	27.376	46.197	1.00	16.82
	ATOM	871	CD2	TYR	177	33.094	27.410	48.770	1.00	17.18
	ATOM	872	CE2	TYR	177	33.954	27.424	47.662	1.00	17.14
	ATOM	873	CZ	TYR	177	33.418	27.406	46.382	1.00	18.38
55	ATOM	874	OH	TYR	177	34.256	27.403	45.289	1.00	18.18
	ATOM	875	C	TYR	177	31.682	25.126	50.581	1.00	19.83
	ATOM	876	O	TYR	177	32.089	24.244	49.826	1.00	19.73
	ATOM	877	N	SER	178	32.298	25.448	51.712	1.00	19.67
	ATOM	878	CA	SER	178	33.555	24.828	52.117	1.00	22.76
60	ATOM	879	CB	SER	178	34.208	25.678	53.211	1.00	23.75
	ATOM	880	OG	SER	178	34.560	26.953	52.702	1.00	28.52

	ATOM	881	SER	178	33.543	23.363	52.365	1.00	22.80	
	ATOM	882	O	SER	178	34.606	22.752	52.672	1.00	22.47
	ATOM	883	N	VAL	179	32.368	22.796	52.803	1.00	22.17
	ATOM	884	CA	VAL	179	32.309	21.401	53.219	1.00	23.76
5	ATOM	885	CB	VAL	179	31.676	21.255	54.631	1.00	24.20
	ATOM	886	CG1	VAL	179	32.400	22.160	55.617	1.00	23.61
	ATOM	887	CG2	VAL	179	30.189	21.584	54.588	1.00	23.11
	ATOM	888	C	VAL	179	31.527	20.541	52.231	1.00	23.17
	ATOM	889	O	VAL	179	31.277	19.366	52.482	1.00	24.77
10	ATOM	890	N	ALA	180	31.153	21.122	51.098	1.00	22.77
	ATOM	891	CA	ALA	180	30.395	20.384	50.093	1.00	21.75
	ATOM	892	CB	ALA	180	29.810	21.352	49.064	1.00	19.82
	ATOM	893	C	ALA	180	31.247	19.329	49.391	1.00	21.47
	ATOM	894	O	ALA	180	32.429	19.549	49.121	1.00	20.99
15	ATOM	895	N	THR	181	30.644	18.179	49.106	1.00	21.38
	ATOM	896	CA	THR	181	31.354	17.111	48.411	1.00	22.06
	ATOM	897	CB	THR	181	31.768	15.957	49.371	1.00	23.05
	ATOM	898	OG1	THR	181	30.598	15.325	49.901	1.00	25.28
	ATOM	899	CG2	THR	181	32.615	16.487	50.520	1.00	22.65
20	ATOM	900	C	THR	181	30.491	16.527	47.298	1.00	22.17
	ATOM	901	O	THR	181	29.266	16.673	47.294	1.00	22.75
	ATOM	902	N	VAL	182	31.145	15.881	46.343	1.00	22.72
	ATOM	903	CA	VAL	182	30.459	15.244	45.228	1.00	24.25
	ATOM	904	CB	VAL	182	30.941	15.813	43.884	1.00	23.11
25	ATOM	905	CG1	VAL	182	30.204	15.133	42.738	1.00	23.43
	ATOM	906	CG2	VAL	182	30.707	17.324	43.852	1.00	22.55
	ATOM	907	C	VAL	182	30.819	13.767	45.329	1.00	26.05
	ATOM	908	O	VAL	182	31.990	13.404	45.239	1.00	26.03
	ATOM	909	N	CYS	183	29.813	12.920	45.522	1.00	30.03
30	ATOM	910	CA	CYS	183	30.051	11.489	45.689	1.00	34.00
	ATOM	911	C	CYS	183	29.670	10.596	44.514	1.00	36.77
	ATOM	912	O	CYS	183	28.800	10.927	43.711	1.00	37.04
	ATOM	913	CB	CYS	183	29.301	10.976	46.916	1.00	33.01
	ATOM	914	SG	CYS	183	29.491	11.922	48.460	1.00	34.26
35	ATOM	915	N	HIS	184	30.333	9.443	44.450	1.00	40.51
	ATOM	916	CA	HIS	184	30.085	8.433	43.427	1.00	43.09
	ATOM	917	CB	HIS	184	31.392	7.748	43.028	1.00	43.26
	ATOM	918	CG	HIS	184	32.240	8.552	42.097	1.00	44.35
	ATOM	919	CD2	HIS	184	33.423	9.183	42.287	1.00	44.78
40	ATOM	920	ND1	HIS	184	31.902	8.761	40.777	1.00	45.33
	ATOM	921	CE1	HIS	184	32.842	9.483	40.194	1.00	45.93
	ATOM	922	NE2	HIS	184	33.777	9.752	41.088	1.00	46.19
	ATOM	923	C	HIS	184	29.141	7.394	44.027	1.00	45.42
	ATOM	924	O	HIS	184	28.935	7.360	45.243	1.00	45.31
45	ATOM	925	N	PRO	185	28.554	6.531	43.181	1.00	47.60
	ATOM	926	CD	PRO	185	28.637	6.523	41.709	1.00	48.72
	ATOM	927	CA	PRO	185	27.632	5.493	43.654	1.00	48.59
	ATOM	928	CB	PRO	185	27.370	4.674	42.394	1.00	48.70
	ATOM	929	CG	PRO	185	27.411	5.721	41.320	1.00	48.86
50	ATOM	930	C	PRO	185	28.231	4.651	44.780	1.00	49.38
	ATOM	931	O	PRO	185	27.577	4.403	45.795	1.00	49.51
	ATOM	932	N	ASN	186	29.478	4.220	44.597	1.00	49.61
	ATOM	933	CA	ASN	186	30.154	3.407	45.602	1.00	50.29
	ATOM	934	CB	ASN	186	31.594	3.082	45.168	1.00	49.31
55	ATOM	935	CG	ASN	186	32.299	4.260	44.507	1.00	47.77
	ATOM	936	OD1	ASN	186	32.262	5.384	45.012	1.00	47.20
	ATOM	937	ND2	ASN	186	32.955	3.993	43.377	1.00	45.72
	ATOM	938	C	ASN	186	30.164	4.072	46.974	1.00	50.98
	ATOM	939	O	ASN	186	29.525	3.592	47.913	1.00	53.09
60	ATOM	940	N	GLY	187	30.885	5.180	47.086	1.00	50.22
	ATOM	941	CA	GLY	187	30.964	5.881	48.353	1.00	47.28

	ATOM	942	C	GLY	187	32.148	6.822	369	1.00	45.22
	ATOM	943	O	GLY	187	32.458	7.432	49.392	1.00	46.04
	ATOM	944	N	SER	188	32.824	6.927	47.232	1.00	42.88
	ATOM	945	CA	SER	188	33.965	7.821	47.122	1.00	41.34
5	ATOM	946	CB	SER	188	34.855	7.415	45.948	1.00	41.68
	ATOM	947	OG	SER	188	35.413	6.130	46.160	1.00	45.75
	ATOM	948	C	SER	188	33.431	9.230	46.904	1.00	38.80
	ATOM	949	O	SER	188	32.807	9.517	45.884	1.00	37.31
	ATOM	950	N	CYS	189	33.655	10.096	47.883	1.00	36.07
10	ATOM	951	CA	CYS	189	33.202	11.471	47.793	1.00	33.90
	ATOM	952	C	CYS	189	34.416	12.358	47.579	1.00	32.06
	ATOM	953	O	CYS	189	35.459	12.159	48.202	1.00	33.88
	ATOM	954	CB	CYS	189	32.479	11.883	49.070	1.00	34.32
	ATOM	955	SG	CYS	189	30.963	10.949	49.464	1.00	35.61
15	ATOM	956	N	LEU	190	34.280	13.331	46.689	1.00	28.75
	ATOM	957	CA	LEU	190	35.377	14.237	46.387	1.00	26.04
	ATOM	958	CB	LEU	190	35.644	14.252	44.875	1.00	26.05
	ATOM	959	CG	LEU	190	36.265	13.013	44.216	1.00	27.11
	ATOM	960	CD1	LEU	190	35.318	11.828	44.314	1.00	28.50
20	ATOM	961	CD2	LEU	190	36.569	13.323	42.753	1.00	27.77
	ATOM	962	C	LEU	190	35.107	15.659	46.866	1.00	24.84
	ATOM	963	O	LEU	190	33.988	16.159	46.765	1.00	23.97
	ATOM	964	N	GLN	191	36.138	16.297	47.405	1.00	24.09
	ATOM	965	CA	GLN	191	36.028	17.677	47.857	1.00	25.37
25	ATOM	966	CB	GLN	191	36.881	17.902	49.109	1.00	27.00
	ATOM	967	CG	GLN	191	36.405	17.122	50.329	1.00	31.92
	ATOM	968	CD	GLN	191	37.279	17.348	51.546	1.00	34.94
	ATOM	969	OE1	GLN	191	38.476	17.061	51.527	1.00	38.38
	ATOM	970	NE2	GLN	191	36.684	17.862	52.614	1.00	37.18
30	ATOM	971	C	GLN	191	36.550	18.534	46.704	1.00	23.81
	ATOM	972	O	GLN	191	37.239	18.024	45.818	1.00	21.41
	ATOM	973	N	LEU	192	36.222	19.824	46.705	1.00	23.17
	ATOM	974	CA	LEU	192	36.680	20.709	45.639	1.00	22.33
	ATOM	975	CB	LEU	192	36.151	22.131	45.856	1.00	21.16
35	ATOM	976	CG	LEU	192	36.586	23.161	44.808	1.00	19.56
	ATOM	977	CD1	LEU	192	36.115	22.726	43.425	1.00	19.50
	ATOM	978	CD2	LEU	192	36.015	24.527	45.166	1.00	21.09
	ATOM	979	C	LEU	192	38.206	20.719	45.582	1.00	23.46
	ATOM	980	O	LEU	192	38.801	20.494	44.533	1.00	23.60
40	ATOM	981	N	GLU	193	38.844	20.973	46.716	1.00	25.17
	ATOM	982	CA	GLU	193	40.297	20.989	46.751	1.00	27.25
	ATOM	983	CB	GLU	193	40.796	22.297	47.367	1.00	31.24
	ATOM	984	CG	GLU	193	40.244	23.527	46.662	1.00	37.45
	ATOM	985	CD	GLU	193	41.081	24.769	46.892	1.00	43.41
45	ATOM	986	OE1	GLU	193	41.256	25.170	48.060	1.00	46.60
	ATOM	987	OE2	GLU	193	41.564	25.348	45.896	1.00	48.13
	ATOM	988	C	GLU	193	40.789	19.794	47.558	1.00	27.24
	ATOM	989	O	GLU	193	40.398	19.614	48.710	1.00	28.55
	ATOM	990	N	PRO	194	41.663	18.964	46.965	1.00	26.18
50	ATOM	991	CD	PRO	194	42.458	17.987	47.737	1.00	26.80
	ATOM	992	CA	PRO	194	42.200	19.094	45.607	1.00	24.97
	ATOM	993	CB	PRO	194	43.662	18.750	45.806	1.00	26.63
	ATOM	994	CG	PRO	194	43.547	17.564	46.737	1.00	25.86
	ATOM	995	C	PRO	194	41.558	18.143	44.595	1.00	23.91
55	ATOM	996	O	PRO	194	41.868	18.203	43.404	1.00	22.16
	ATOM	997	N	ASP	195	40.672	17.273	45.072	1.00	22.30
	ATOM	998	CA	ASP	195	40.037	16.269	44.225	1.00	21.76
	ATOM	999	CB	ASP	195	39.029	15.452	45.036	1.00	22.60
	ATOM	1000	CG	ASP	195	39.608	14.946	46.341	1.00	26.35
60	ATOM	1001	OD1	ASP	195	40.763	14.474	46.339	1.00	26.43
	ATOM	1002	OD2	ASP	195	38.902	15.018	47.369	1.00	29.80

	ATOM	1003	ASP	195	39.365	16.754	42.9	1.00	21.71
	ATOM	1004	O ASP	195	39.793	16.392	41.850	1.00	23.10
	ATOM	1005	N LEU	196	38.308	17.551	43.068	1.00	19.29
	ATOM	1006	CA LEU	196	37.604	18.027	41.875	1.00	19.93
5	ATOM	1007	CB LEU	196	36.316	18.753	42.273	1.00	19.22
	ATOM	1008	CG LEU	196	35.288	17.859	42.971	1.00	21.05
	ATOM	1009	CD1 LEU	196	34.177	18.719	43.553	1.00	21.19
	ATOM	1010	CD2 LEU	196	34.726	16.834	41.978	1.00	18.71
	ATOM	1011	C LEU	196	38.473	18.933	41.020	1.00	18.92
10	ATOM	1012	O LEU	196	38.405	18.887	39.794	1.00	19.13
	ATOM	1013	N THR	197	39.287	19.757	41.673	1.00	19.32
	ATOM	1014	CA THR	197	40.179	20.667	40.968	1.00	20.23
	ATOM	1015	CB THR	197	40.994	21.530	41.962	1.00	21.09
	ATOM	1016	OG1 THR	197	40.098	22.333	42.739	1.00	23.68
15	ATOM	1017	CG2 THR	197	41.962	22.444	41.212	1.00	23.82
	ATOM	1018	C THR	197	41.138	19.855	40.103	1.00	20.96
	ATOM	1019	O THR	197	41.408	20.203	38.950	1.00	18.55
	ATOM	1020	N ASN	198	41.649	18.762	40.660	1.00	20.33
	ATOM	1021	CA ASN	198	42.566	17.916	39.910	1.00	21.82
20	ATOM	1022	CB ASN	198	43.144	16.820	40.800	1.00	24.76
	ATOM	1023	CG ASN	198	44.158	15.971	40.068	1.00	29.65
	ATOM	1024	OD1 ASN	198	45.283	16.409	39.812	1.00	31.73
	ATOM	1025	ND2 ASN	198	43.759	14.757	39.701	1.00	31.98
	ATOM	1026	C ASN	198	41.876	17.272	38.706	1.00	19.19
25	ATOM	1027	O ASN	198	42.457	17.200	37.624	1.00	21.70
	ATOM	1028	N VAL	199	40.645	16.800	38.893	1.00	18.96
	ATOM	1029	CA VAL	199	39.907	16.180	37.795	1.00	18.37
	ATOM	1030	CB VAL	199	38.516	15.666	38.257	1.00	19.57
	ATOM	1031	CG1 VAL	199	37.680	15.275	37.048	1.00	18.46
30	ATOM	1032	CG2 VAL	199	38.682	14.451	39.187	1.00	20.39
	ATOM	1033	C VAL	199	39.715	17.182	36.650	1.00	18.73
	ATOM	1034	O VAL	199	39.965	16.869	35.485	1.00	15.90
	ATOM	1035	N MET	200	39.279	18.392	36.988	1.00	18.95
	ATOM	1036	CA MET	200	39.063	19.423	35.980	1.00	17.76
35	ATOM	1037	CB MET	200	38.475	20.680	36.630	1.00	18.24
	ATOM	1038	CG MET	200	37.084	20.494	37.227	1.00	16.87
	ATOM	1039	SD MET	200	35.914	19.807	36.056	1.00	20.02
	ATOM	1040	CE MET	200	35.798	21.162	34.832	1.00	21.44
	ATOM	1041	C MET	200	40.353	19.794	35.244	1.00	16.67
40	ATOM	1042	O MET	200	40.328	20.125	34.060	1.00	17.29
	ATOM	1043	N ALA	201	41.478	19.724	35.944	1.00	15.31
	ATOM	1044	CA ALA	201	42.764	20.088	35.356	1.00	16.45
	ATOM	1045	CB ALA	201	43.708	20.570	36.458	1.00	14.53
	ATOM	1046	C ALA	201	43.473	19.014	34.530	1.00	17.34
45	ATOM	1047	O ALA	201	44.191	19.336	33.580	1.00	18.65
	ATOM	1048	N THR	202	43.263	17.750	34.875	1.00	14.75
	ATOM	1049	CA THR	202	43.963	16.665	34.199	1.00	15.77
	ATOM	1050	CB THR	202	44.717	15.818	35.230	1.00	16.12
	ATOM	1051	OG1 THR	202	43.773	15.222	36.124	1.00	17.60
50	ATOM	1052	CG2 THR	202	45.669	16.694	36.042	1.00	16.30
	ATOM	1053	C THR	202	43.151	15.721	33.322	1.00	17.01
	ATOM	1054	O THR	202	43.680	15.157	32.364	1.00	17.58
	ATOM	1055	N SER	203	41.876	15.531	33.634	1.00	16.36
	ATOM	1056	CA SER	203	41.070	14.635	32.816	1.00	16.62
55	ATOM	1057	CB SER	203	39.717	14.379	33.471	1.00	17.45
	ATOM	1058	OG SER	203	38.883	13.637	32.592	1.00	17.94
	ATOM	1059	C SER	203	40.841	15.190	31.411	1.00	17.76
	ATOM	1060	O SER	203	40.627	16.390	31.231	1.00	16.09
	ATOM	1061	N ARG	204	40.894	14.305	30.420	1.00	17.37
60	ATOM	1062	CA ARG	204	40.656	14.675	29.029	1.00	18.83
	ATOM	1063	CB ARG	204	41.899	14.394	28.175	1.00	21.32

	ATOM	1064	CG	ARG	204	42.806	15.601	29.910	1.00	25.72
	ATOM	1065	CD	ARG	204	42.784	16.603	29.041	1.00	24.96
	ATOM	1066	NE	ARG	204	44.009	17.391	29.117	1.00	25.28
	ATOM	1067	CZ	ARG	204	44.224	18.329	30.035	1.00	25.48
5	ATOM	1068	NH1	ARG	204	45.366	18.998	30.055	1.00	27.49
	ATOM	1069	NH2	ARG	204	43.287	18.610	30.928	1.00	26.72
	ATOM	1070	C	ARG	204	39.473	13.859	28.510	1.00	18.41
	ATOM	1071	O	ARG	204	39.333	13.648	27.306	1.00	18.06
	ATOM	1072	N	LYS	205	38.629	13.394	29.427	1.00	19.07
10	ATOM	1073	CA	LYS	205	37.449	12.614	29.058	1.00	19.70
	ATOM	1074	CB	LYS	205	37.396	11.320	29.876	1.00	20.49
	ATOM	1075	CG	LYS	205	38.655	10.464	29.712	1.00	25.63
	ATOM	1076	CD	LYS	205	38.499	9.071	30.304	1.00	27.27
	ATOM	1077	CE	LYS	205	37.450	8.267	29.552	1.00	32.01
15	ATOM	1078	NZ	LYS	205	37.428	6.847	30.001	1.00	36.31
	ATOM	1079	C	LYS	205	36.181	13.441	29.276	1.00	18.76
	ATOM	1080	O	LYS	205	35.836	13.786	30.412	1.00	16.76
	ATOM	1081	N	TYR	206	35.499	13.750	28.175	1.00	17.94
	ATOM	1082	CA	TYR	206	34.280	14.564	28.187	1.00	18.82
20	ATOM	1083	CB	TYR	206	33.561	14.456	26.834	1.00	17.41
	ATOM	1084	CG	TYR	206	32.581	15.582	26.551	1.00	17.19
	ATOM	1085	CD1	TYR	206	32.960	16.682	25.782	1.00	17.56
	ATOM	1086	CE1	TYR	206	32.068	17.718	25.509	1.00	17.54
	ATOM	1087	CD2	TYR	206	31.276	15.546	27.049	1.00	18.96
25	ATOM	1088	CE2	TYR	206	30.373	16.581	26.787	1.00	19.27
	ATOM	1089	CZ	TYR	206	30.778	17.666	26.015	1.00	20.83
	ATOM	1090	OH	TYR	206	29.908	18.711	25.768	1.00	21.81
	ATOM	1091	C	TYR	206	33.298	14.209	29.303	1.00	18.43
	ATOM	1092	O	TYR	206	32.820	15.092	30.016	1.00	18.33
30	ATOM	1093	N	GLU	207	32.996	12.922	29.454	1.00	17.90
	ATOM	1094	CA	GLU	207	32.049	12.492	30.479	1.00	18.16
	ATOM	1095	CB	GLU	207	31.598	11.046	30.224	1.00	20.18
	ATOM	1096	CG	GLU	207	30.791	10.830	28.943	1.00	20.70
	ATOM	1097	CD	GLU	207	29.494	11.633	28.895	1.00	23.77
35	ATOM	1098	OE1	GLU	207	28.760	11.661	29.907	1.00	22.24
	ATOM	1099	OE2	GLU	207	29.202	12.226	27.833	1.00	24.84
	ATOM	1100	C	GLU	207	32.548	12.619	31.917	1.00	17.41
	ATOM	1101	O	GLU	207	31.752	12.866	32.821	1.00	16.71
	ATOM	1102	N	ASP	208	33.848	12.443	32.145	1.00	16.59
40	ATOM	1103	CA	ASP	208	34.373	12.560	33.506	1.00	17.48
	ATOM	1104	CB	ASP	208	35.774	11.944	33.617	1.00	19.01
	ATOM	1105	CG	ASP	208	35.779	10.440	33.362	1.00	24.16
	ATOM	1106	OD1	ASP	208	34.689	9.830	33.331	1.00	26.06
	ATOM	1107	OD2	ASP	208	36.875	9.865	33.201	1.00	23.40
45	ATOM	1108	C	ASP	208	34.416	14.033	33.906	1.00	16.55
	ATOM	1109	O	ASP	208	34.133	14.389	35.052	1.00	13.04
	ATOM	1110	N	LEU	209	34.769	14.885	32.951	1.00	15.38
	ATOM	1111	CA	LEU	209	34.822	16.319	33.200	1.00	16.48
	ATOM	1112	CB	LEU	209	35.386	17.048	31.974	1.00	14.57
50	ATOM	1113	CG	LEU	209	36.893	16.869	31.731	1.00	14.85
	ATOM	1114	CD1	LEU	209	37.298	17.512	30.412	1.00	14.52
	ATOM	1115	CD2	LEU	209	37.668	17.501	32.880	1.00	14.67
	ATOM	1116	C	LEU	209	33.404	16.803	33.499	1.00	16.80
	ATOM	1117	O	LEU	209	33.192	17.636	34.385	1.00	17.09
55	ATOM	1118	N	LEU	210	32.434	16.258	32.768	1.00	15.84
	ATOM	1119	CA	LEU	210	31.037	16.631	32.955	1.00	15.80
	ATOM	1120	CB	LEU	210	30.160	15.971	31.881	1.00	18.19
	ATOM	1121	CG	LEU	210	28.670	16.336	31.924	1.00	18.57
	ATOM	1122	CD1	LEU	210	28.524	17.850	31.917	1.00	23.32
60	ATOM	1123	CD2	LEU	210	27.942	15.731	30.735	1.00	22.22
	ATOM	1124	C	LEU	210	30.530	16.250	34.342	1.00	16.05

	ATOM	1125	LEU	210	29.840	17.037	34.911	1.00	16.25	
	ATOM	1126	N	TRP	211	30.869	15.042	34.784	1.00	15.85
	ATOM	1127	CA	TRP	211	30.452	14.556	36.099	1.00	16.79
	ATOM	1128	CB	TRP	211	31.033	13.159	36.362	1.00	19.10
5	ATOM	1129	CG	TRP	211	30.687	12.625	37.721	1.00	22.86
	ATOM	1130	CD2	TRP	211	31.472	12.746	38.916	1.00	24.67
	ATOM	1131	CE2	TRP	211	30.727	12.167	39.967	1.00	26.17
	ATOM	1132	CE3	TRP	211	32.731	13.290	39.199	1.00	25.03
	ATOM	1133	CD1	TRP	211	29.531	11.991	38.086	1.00	25.13
10	ATOM	1134	NE1	TRP	211	29.549	11.714	39.436	1.00	25.08
	ATOM	1135	CZ2	TRP	211	31.202	12.119	41.284	1.00	27.62
	ATOM	1136	CZ3	TRP	211	33.203	13.241	40.509	1.00	26.84
	ATOM	1137	CH2	TRP	211	32.439	12.659	41.533	1.00	27.01
	ATOM	1138	C	TRP	211	30.914	15.505	37.208	1.00	15.76
15	ATOM	1139	O	TRP	211	30.139	15.871	38.091	1.00	15.00
	ATOM	1140	N	ALA	212	32.181	15.899	37.158	1.00	16.39
	ATOM	1141	CA	ALA	212	32.739	16.796	38.162	1.00	15.16
	ATOM	1142	CB	ALA	212	34.256	16.863	38.010	1.00	14.42
	ATOM	1143	C	ALA	212	32.142	18.200	38.063	1.00	15.48
20	ATOM	1144	O	ALA	212	31.839	18.826	39.080	1.00	16.14
	ATOM	1145	N	TRP	213	31.982	18.684	36.835	1.00	15.80
	ATOM	1146	CA	TRP	213	31.436	20.019	36.581	1.00	16.29
	ATOM	1147	CB	TRP	213	31.506	20.331	35.082	1.00	15.34
	ATOM	1148	CG	TRP	213	31.110	21.741	34.725	1.00	15.79
25	ATOM	1149	CD2	TRP	213	29.792	22.209	34.413	1.00	15.16
	ATOM	1150	CE2	TRP	213	29.885	23.601	34.179	1.00	16.51
	ATOM	1151	CE3	TRP	213	28.538	21.588	34.312	1.00	16.54
	ATOM	1152	CD1	TRP	213	31.929	22.837	34.666	1.00	16.30
	ATOM	1153	NE1	TRP	213	31.199	23.958	34.338	1.00	15.53
30	ATOM	1154	CZ2	TRP	213	28.771	24.382	33.849	1.00	14.24
	ATOM	1155	CZ3	TRP	213	27.432	22.366	33.985	1.00	16.40
	ATOM	1156	CH2	TRP	213	27.558	23.748	33.756	1.00	15.28
	ATOM	1157	C	TRP	213	29.985	20.138	37.057	1.00	15.56
	ATOM	1158	O	TRP	213	29.634	21.070	37.779	1.00	13.86
35	ATOM	1159	N	GLU	214	29.149	19.192	36.639	1.00	15.67
	ATOM	1160	CA	GLU	214	27.741	19.178	37.019	1.00	15.17
	ATOM	1161	CB	GLU	214	26.982	18.139	36.187	1.00	17.45
	ATOM	1162	CG	GLU	214	25.473	18.101	36.444	1.00	19.85
	ATOM	1163	CD	GLU	214	24.785	19.410	36.087	1.00	23.48
40	ATOM	1164	OE1	GLU	214	25.012	19.911	34.968	1.00	25.84
	ATOM	1165	OE2	GLU	214	24.012	19.938	36.918	1.00	26.74
	ATOM	1166	C	GLU	214	27.576	18.857	38.499	1.00	16.13
	ATOM	1167	O	GLU	214	26.791	19.497	39.206	1.00	15.22
	ATOM	1168	N	GLY	215	28.321	17.858	38.962	1.00	17.03
45	ATOM	1169	CA	GLY	215	28.244	17.452	40.352	1.00	17.32
	ATOM	1170	C	GLY	215	28.530	18.576	41.328	1.00	18.14
	ATOM	1171	O	GLY	215	27.812	18.750	42.312	1.00	18.29
	ATOM	1172	N	TRP	216	29.584	19.340	41.067	1.00	17.32
	ATOM	1173	CA	TRP	216	29.940	20.440	41.952	1.00	16.83
50	ATOM	1174	CB	TRP	216	31.209	21.145	41.459	1.00	15.21
	ATOM	1175	CG	TRP	216	31.605	22.288	42.345	1.00	16.54
	ATOM	1176	CD2	TRP	216	31.879	22.226	43.751	1.00	17.16
	ATOM	1177	CE2	TRP	216	32.141	23.544	44.185	1.00	16.95
	ATOM	1178	CE3	TRP	216	31.924	21.182	44.689	1.00	17.45
55	ATOM	1179	CD1	TRP	216	31.716	23.603	41.991	1.00	14.98
	ATOM	1180	NE1	TRP	216	32.036	24.364	43.092	1.00	17.71
	ATOM	1181	CZ2	TRP	216	32.444	23.849	45.518	1.00	16.83
	ATOM	1182	CZ3	TRP	216	32.225	21.487	46.016	1.00	17.47
	ATOM	1183	CH2	TRP	216	32.480	22.811	46.415	1.00	18.90
60	ATOM	1184	C	TRP	216	28.796	21.441	42.028	1.00	15.17
	ATOM	1185	O	TRP	216	28.422	21.900	43.105	1.00	17.84

	ATOM	1186	N	ARG	217	28.234	21.779	40.878	1.00	15.34
	ATOM	1187	CA	ARG	217	27.136	22.724	40.854	1.00	16.45
	ATOM	1188	CB	ARG	217	26.868	23.142	39.407	1.00	13.86
	ATOM	1189	CG	ARG	217	27.981	24.074	38.923	1.00	16.46
5	ATOM	1190	CD	ARG	217	28.079	24.265	37.416	1.00	15.80
	ATOM	1191	NE	ARG	217	29.144	25.230	37.139	1.00	15.22
	ATOM	1192	CZ	ARG	217	30.444	24.974	37.269	1.00	15.55
	ATOM	1193	NH1	ARG	217	31.333	25.920	37.009	1.00	16.82
	ATOM	1194	NH2	ARG	217	30.860	23.766	37.632	1.00	15.71
10	ATOM	1195	C	ARG	217	25.903	22.145	41.547	1.00	17.65
	ATOM	1196	O	ARG	217	25.202	22.858	42.263	1.00	17.39
	ATOM	1197	N	ASP	218	25.661	20.848	41.374	1.00	18.73
	ATOM	1198	CA	ASP	218	24.513	20.215	42.021	1.00	20.64
	ATOM	1199	CB	ASP	218	24.388	18.745	41.612	1.00	22.06
15	ATOM	1200	CG	ASP	218	24.011	18.570	40.161	1.00	24.98
	ATOM	1201	OD1	ASP	218	23.555	19.550	39.537	1.00	24.48
	ATOM	1202	OD2	ASP	218	24.158	17.437	39.648	1.00	26.98
	ATOM	1203	C	ASP	218	24.610	20.272	43.545	1.00	19.56
	ATOM	1204	O	ASP	218	23.619	20.520	44.227	1.00	19.81
20	ATOM	1205	N	LYS	219	25.807	20.043	44.077	1.00	20.45
	ATOM	1206	CA	LYS	219	26.003	20.031	45.525	1.00	21.29
	ATOM	1207	CB	LYS	219	27.121	19.051	45.890	1.00	21.65
	ATOM	1208	CG	LYS	219	26.895	17.629	45.373	1.00	25.13
	ATOM	1209	CD	LYS	219	25.543	17.058	45.813	1.00	28.05
25	ATOM	1210	CE	LYS	219	25.447	16.918	47.328	1.00	29.00
	ATOM	1211	NZ	LYS	219	26.538	16.060	47.868	1.00	30.61
	ATOM	1212	C	LYS	219	26.279	21.378	46.183	1.00	21.42
	ATOM	1213	O	LYS	219	25.719	21.678	47.236	1.00	24.45
	ATOM	1214	N	ALA	220	27.143	22.188	45.579	1.00	21.30
30	ATOM	1215	CA	ALA	220	27.468	23.492	46.153	1.00	20.70
	ATOM	1216	CB	ALA	220	28.902	23.878	45.799	1.00	20.00
	ATOM	1217	C	ALA	220	26.504	24.578	45.685	1.00	19.99
	ATOM	1218	O	ALA	220	25.902	25.276	46.501	1.00	21.16
	ATOM	1219	N	GLY	221	26.358	24.711	44.370	1.00	18.26
35	ATOM	1220	CA	GLY	221	25.476	25.722	43.819	1.00	18.25
	ATOM	1221	C	GLY	221	24.028	25.653	44.275	1.00	19.99
	ATOM	1222	O	GLY	221	23.496	26.628	44.808	1.00	19.79
	ATOM	1223	N	ARG	222	23.378	24.512	44.067	1.00	17.04
	ATOM	1224	CA	ARG	222	21.982	24.377	44.467	1.00	19.12
40	ATOM	1225	CB	ARG	222	21.443	22.989	44.091	1.00	17.89
	ATOM	1226	CG	ARG	222	21.397	22.730	42.592	1.00	19.59
	ATOM	1227	CD	ARG	222	20.767	21.367	42.283	1.00	24.35
	ATOM	1228	NE	ARG	222	20.643	21.152	40.845	1.00	30.28
	ATOM	1229	CZ	ARG	222	20.353	19.984	40.276	1.00	33.18
45	ATOM	1230	NH1	ARG	222	20.150	18.901	41.021	1.00	31.51
	ATOM	1231	NH2	ARG	222	20.281	19.896	38.954	1.00	33.98
	ATOM	1232	C	ARG	222	21.800	24.611	45.965	1.00	18.43
	ATOM	1233	O	ARG	222	20.803	25.193	46.385	1.00	19.58
	ATOM	1234	N	ALA	223	22.771	24.171	46.757	1.00	16.28
50	ATOM	1235	CA	ALA	223	22.715	24.317	48.210	1.00	19.92
	ATOM	1236	CB	ALA	223	23.824	23.483	48.859	1.00	19.14
	ATOM	1237	C	ALA	223	22.815	25.767	48.681	1.00	19.46
	ATOM	1238	O	ALA	223	22.435	26.089	49.806	1.00	22.30
	ATOM	1239	N	ILE	224	23.329	26.646	47.833	1.00	18.66
55	ATOM	1240	CA	ILE	224	23.457	28.045	48.222	1.00	17.34
	ATOM	1241	CB	ILE	224	24.679	28.705	47.522	1.00	16.89
	ATOM	1242	CG2	ILE	224	24.729	30.202	47.819	1.00	15.15
	ATOM	1243	CG1	ILE	224	25.966	28.023	47.993	1.00	14.94
	ATOM	1244	CD1	ILE	224	26.218	28.141	49.488	1.00	15.97
60	ATOM	1245	C	ILE	224	22.187	28.830	47.897	1.00	17.43
	ATOM	1246	O	ILE	224	21.883	29.825	48.550	1.00	18.29

	ATOM	1247	LEU	225	21.435	28.360	46.390	1.00	16.61	
	ATOM	1248	CA	LEU	225	20.217	29.044	46.480	1.00	18.87
	ATOM	1249	CB	LEU	225	19.511	28.233	45.386	1.00	17.28
	ATOM	1250	CG	LEU	225	18.251	28.880	44.803	1.00	17.62
5	ATOM	1251	CD1	LEU	225	18.591	30.250	44.247	1.00	15.98
	ATOM	1252	CD2	LEU	225	17.664	27.993	43.712	1.00	17.36
	ATOM	1253	C	LEU	225	19.208	29.387	47.582	1.00	20.30
	ATOM	1254	O	LEU	225	18.573	30.440	47.529	1.00	21.05
	ATOM	1255	N	GLN	226	19.054	28.522	48.582	1.00	20.59
10	ATOM	1256	CA	GLN	226	18.086	28.812	49.635	1.00	20.98
	ATOM	1257	CB	GLN	226	17.887	27.602	50.554	1.00	22.39
	ATOM	1258	CG	GLN	226	19.098	27.206	51.373	1.00	22.59
	ATOM	1259	CD	GLN	226	18.743	26.255	52.506	1.00	28.86
	ATOM	1260	OE1	GLN	226	19.401	25.236	52.708	1.00	29.99
15	ATOM	1261	NE2	GLN	226	17.702	26.594	53.259	1.00	30.07
	ATOM	1262	C	GLN	226	18.460	30.027	50.476	1.00	20.99
	ATOM	1263	O	GLN	226	17.594	30.624	51.113	1.00	20.68
	ATOM	1264	N	PHE	227	19.738	30.402	50.472	1.00	17.78
	ATOM	1265	CA	PHE	227	20.188	31.548	51.261	1.00	18.81
20	ATOM	1266	CB	PHE	227	21.555	31.278	51.901	1.00	18.57
	ATOM	1267	CG	PHE	227	21.626	30.016	52.709	1.00	20.93
	ATOM	1268	CD1	PHE	227	22.241	28.881	52.191	1.00	19.23
	ATOM	1269	CD2	PHE	227	21.106	29.970	53.998	1.00	19.89
	ATOM	1270	CE1	PHE	227	22.340	27.720	52.945	1.00	20.37
25	ATOM	1271	CE2	PHE	227	21.198	28.812	54.763	1.00	20.86
	ATOM	1272	CZ	PHE	227	21.818	27.683	54.236	1.00	21.52
	ATOM	1273	C	PHE	227	20.320	32.875	50.515	1.00	18.52
	ATOM	1274	O	PHE	227	20.150	33.936	51.116	1.00	18.03
	ATOM	1275	N	TYR	228	20.631	32.824	49.220	1.00	17.84
30	ATOM	1276	CA	TYR	228	20.870	34.046	48.458	1.00	15.89
	ATOM	1277	CB	TYR	228	21.267	33.716	47.013	1.00	14.37
	ATOM	1278	CG	TYR	228	22.396	34.599	46.526	1.00	13.39
	ATOM	1279	CD1	TYR	228	23.678	34.485	47.068	1.00	11.77
	ATOM	1280	CE1	TYR	228	24.720	35.322	46.653	1.00	12.65
35	ATOM	1281	CD2	TYR	228	22.178	35.573	45.555	1.00	14.08
	ATOM	1282	CE2	TYR	228	23.207	36.420	45.134	1.00	13.53
	ATOM	1283	CZ	TYR	228	24.472	36.289	45.685	1.00	14.24
	ATOM	1284	OH	TYR	228	25.484	37.127	45.274	1.00	15.11
	ATOM	1285	C	TYR	228	19.817	35.146	48.437	1.00	16.77
40	ATOM	1286	O	TYR	228	20.143	36.313	48.645	1.00	16.17
	ATOM	1287	N	PRO	229	18.546	34.805	48.173	1.00	16.14
	ATOM	1288	CD	PRO	229	17.939	33.525	47.766	1.00	16.20
	ATOM	1289	CA	PRO	229	17.556	35.887	48.156	1.00	16.22
	ATOM	1290	CB	PRO	229	16.240	35.150	47.888	1.00	16.46
45	ATOM	1291	CG	PRO	229	16.688	33.982	47.027	1.00	16.36
	ATOM	1292	C	PRO	229	17.525	36.702	49.451	1.00	16.67
	ATOM	1293	O	PRO	229	17.395	37.924	49.414	1.00	18.90
	ATOM	1294	N	LYS	230	17.655	36.030	50.590	1.00	17.12
	ATOM	1295	CA	LYS	230	17.629	36.717	51.881	1.00	18.28
50	ATOM	1296	CB	LYS	230	17.459	35.711	53.019	1.00	20.03
	ATOM	1297	CG	LYS	230	16.968	36.337	54.314	1.00	24.93
	ATOM	1298	CD	LYS	230	15.626	37.010	54.076	1.00	29.71
	ATOM	1299	CE	LYS	230	14.991	37.481	55.356	1.00	33.08
	ATOM	1300	NZ	LYS	230	13.687	38.138	55.078	1.00	33.19
55	ATOM	1301	C	LYS	230	18.909	37.525	52.090	1.00	17.96
	ATOM	1302	O	LYS	230	18.886	38.617	52.662	1.00	15.33
	ATOM	1303	N	TYR	231	20.022	36.971	51.627	1.00	16.71
	ATOM	1304	CA	TYR	231	21.314	37.638	51.715	1.00	16.94
	ATOM	1305	CB	TYR	231	22.383	36.730	51.107	1.00	14.95
60	ATOM	1306	CG	TYR	231	23.567	37.445	50.490	1.00	13.63
	ATOM	1307	CD1	TYR	231	24.576	37.988	51.286	1.00	13.32

	ATOM	1308	CE1	TYR	231	25.693	38.608	49.715	1.00	14.67
	ATOM	1309	CD2	TYR	231	23.694	37.543	49.101	1.00	14.54
	ATOM	1310	CE2	TYR	231	24.802	38.162	48.518	1.00	13.31
	ATOM	1311	CZ	TYR	231	25.797	38.688	49.329	1.00	12.39
5	ATOM	1312	OH	TYR	231	26.899	39.279	48.764	1.00	13.70
	ATOM	1313	C	TYR	231	21.251	38.961	50.949	1.00	14.98
	ATOM	1314	O	TYR	231	21.702	39.997	51.434	1.00	14.92
	ATOM	1315	N	VAL	232	20.695	38.910	49.742	1.00	16.25
	ATOM	1316	CA	VAL	232	20.568	40.091	48.888	1.00	15.73
10	ATOM	1317	CB	VAL	232	19.978	39.693	47.511	1.00	16.32
	ATOM	1318	CG1	VAL	232	19.518	40.922	46.744	1.00	14.95
	ATOM	1319	CG2	VAL	232	21.041	38.931	46.706	1.00	14.49
	ATOM	1320	C	VAL	232	19.705	41.168	49.546	1.00	17.00
	ATOM	1321	O	VAL	232	20.044	42.359	49.532	1.00	14.95
15	ATOM	1322	N	GLU	233	18.596	40.742	50.136	1.00	16.77
	ATOM	1323	CA	GLU	233	17.695	41.670	50.802	1.00	18.55
	ATOM	1324	CB	GLU	233	16.459	40.919	51.315	1.00	20.59
	ATOM	1325	CG	GLU	233	15.554	41.728	52.234	1.00	27.30
	ATOM	1326	CD	GLU	233	14.310	40.956	52.658	1.00	32.53
20	ATOM	1327	OE1	GLU	233	14.424	39.751	52.977	1.00	32.64
	ATOM	1328	OE2	GLU	233	13.217	41.561	52.679	1.00	38.43
	ATOM	1329	C	GLU	233	18.413	42.355	51.959	1.00	17.80
	ATOM	1330	O	GLU	233	18.380	43.576	52.081	1.00	17.11
	ATOM	1331	N	LEU	234	19.084	41.566	52.791	1.00	17.72
25	ATOM	1332	CA	LEU	234	19.782	42.107	53.951	1.00	17.47
	ATOM	1333	CB	LEU	234	20.161	40.971	54.906	1.00	17.40
	ATOM	1334	CG	LEU	234	18.941	40.262	55.503	1.00	22.59
	ATOM	1335	CD1	LEU	234	19.386	39.093	56.366	1.00	22.34
	ATOM	1336	CD2	LEU	234	18.119	41.256	56.319	1.00	22.15
30	ATOM	1337	C	LEU	234	21.006	42.963	53.638	1.00	17.17
	ATOM	1338	O	LEU	234	21.205	43.995	54.273	1.00	16.30
	ATOM	1339	N	ILE	235	21.823	42.560	52.666	1.00	14.58
	ATOM	1340	CA	ILE	235	23.000	43.363	52.355	1.00	14.01
	ATOM	1341	CB	ILE	235	24.023	42.592	51.472	1.00	13.57
35	ATOM	1342	CG2	ILE	235	23.462	42.349	50.074	1.00	12.52
	ATOM	1343	CG1	ILE	235	25.331	43.389	51.395	1.00	11.74
	ATOM	1344	CD1	ILE	235	26.469	42.632	50.735	1.00	11.93
	ATOM	1345	C	ILE	235	22.563	44.661	51.679	1.00	14.36
	ATOM	1346	O	ILE	235	23.193	45.705	51.857	1.00	13.51
40	ATOM	1347	N	ASN	236	21.474	44.600	50.916	1.00	14.39
	ATOM	1348	CA	ASN	236	20.951	45.798	50.261	1.00	15.23
	ATOM	1349	CB	ASN	236	19.837	45.448	49.264	1.00	15.19
	ATOM	1350	CG	ASN	236	20.365	45.201	47.862	1.00	15.72
	ATOM	1351	OD1	ASN	236	21.519	45.501	47.560	1.00	15.27
45	ATOM	1352	ND2	ASN	236	19.512	44.667	46.992	1.00	18.17
	ATOM	1353	C	ASN	236	20.394	46.751	51.322	1.00	15.66
	ATOM	1354	O	ASN	236	20.570	47.964	51.231	1.00	16.15
	ATOM	1355	N	GLN	237	19.721	46.190	52.322	1.00	17.57
	ATOM	1356	CA	GLN	237	19.146	46.989	53.404	1.00	18.43
50	ATOM	1357	CB	GLN	237	18.391	46.090	54.391	1.00	19.68
	ATOM	1358	CG	GLN	237	17.537	46.858	55.391	1.00	22.74
	ATOM	1359	CD	GLN	237	16.845	45.947	56.397	1.00	25.62
	ATOM	1360	OE1	GLN	237	16.460	44.821	56.073	1.00	25.13
	ATOM	1361	NE2	GLN	237	16.667	46.441	57.620	1.00	25.08
55	ATOM	1362	C	GLN	237	20.261	47.727	54.139	1.00	17.44
	ATOM	1363	O	GLN	237	20.158	48.924	54.402	1.00	17.22
	ATOM	1364	N	ALA	238	21.323	47.003	54.478	1.00	15.64
	ATOM	1365	CA	ALA	238	22.460	47.604	55.162	1.00	16.63
	ATOM	1366	CB	ALA	238	23.530	46.549	55.436	1.00	14.09
60	ATOM	1367	C	ALA	238	23.038	48.727	54.303	1.00	16.39
	ATOM	1368	O	ALA	238	23.385	49.790	54.813	1.00	18.77

	ATOM	1369	ALA	239	23.142	48.484	52.950	1.00	15.79
	ATOM	1370	CA ALA	239	23.672	49.482	52.076	1.00	16.70
	ATOM	1371	CB ALA	239	23.725	48.921	50.650	1.00	14.56
	ATOM	1372	C ALA	239	22.827	50.758	52.102	1.00	17.22
5	ATOM	1373	O ALA	239	23.369	51.866	52.172	1.00	14.26
	ATOM	1374	N ARG	240	21.505	50.606	52.043	1.00	15.36
	ATOM	1375	CA ARG	240	20.622	51.774	52.064	1.00	17.46
	ATOM	1376	CB ARG	240	19.162	51.376	51.793	1.00	15.33
	ATOM	1377	CG ARG	240	18.893	50.824	50.388	1.00	17.28
10	ATOM	1378	CD ARG	240	17.393	50.778	50.080	1.00	16.93
	ATOM	1379	NE ARG	240	16.638	50.067	51.108	1.00	19.77
	ATOM	1380	CZ ARG	240	16.521	48.744	51.180	1.00	22.01
	ATOM	1381	NH1 ARG	240	17.107	47.966	50.271	1.00	19.52
	ATOM	1382	NH2 ARG	240	15.823	48.197	52.169	1.00	18.66
15	ATOM	1383	C ARG	240	20.701	52.506	53.404	1.00	17.66
	ATOM	1384	O ARG	240	20.569	53.729	53.460	1.00	16.54
	ATOM	1385	N LEU	241	20.916	51.759	54.482	1.00	17.65
	ATOM	1386	CA LEU	241	21.005	52.374	55.800	1.00	19.55
	ATOM	1387	CB LEU	241	20.827	51.315	56.898	1.00	19.64
20	ATOM	1388	CG LEU	241	19.413	50.726	57.017	1.00	19.83
	ATOM	1389	CD1 LEU	241	19.416	49.573	57.999	1.00	20.06
	ATOM	1390	CD2 LEU	241	18.434	51.804	57.470	1.00	22.50
	ATOM	1391	C LEU	241	22.326	53.117	55.973	1.00	19.27
	ATOM	1392	O LEU	241	22.548	53.783	56.986	1.00	20.50
25	ATOM	1393	N ASN	242	23.202	53.001	54.980	1.00	16.73
	ATOM	1394	CA ASN	242	24.481	53.693	55.021	1.00	16.25
	ATOM	1395	CB ASN	242	25.636	52.697	54.897	1.00	15.12
	ATOM	1396	CG ASN	242	25.891	51.952	56.195	1.00	19.42
	ATOM	1397	OD1 ASN	242	26.139	52.571	57.234	1.00	19.98
30	ATOM	1398	ND2 ASN	242	25.825	50.622	56.148	1.00	18.09
	ATOM	1399	C ASN	242	24.572	54.763	53.934	1.00	17.24
	ATOM	1400	O ASN	242	25.652	55.290	53.655	1.00	17.37
	ATOM	1401	N GLY	243	23.429	55.066	53.321	1.00	15.75
	ATOM	1402	CA GLY	243	23.373	56.099	52.299	1.00	16.87
35	ATOM	1403	C GLY	243	23.543	55.696	50.844	1.00	15.89
	ATOM	1404	O GLY	243	23.626	56.565	49.978	1.00	15.97
	ATOM	1405	N TYR	244	23.608	54.398	50.565	1.00	16.21
	ATOM	1406	CA TYR	244	23.764	53.922	49.189	1.00	14.57
	ATOM	1407	CB TYR	244	24.761	52.757	49.135	1.00	14.48
40	ATOM	1408	CG TYR	244	26.167	53.146	49.521	1.00	15.74
	ATOM	1409	CD1 TYR	244	26.665	52.860	50.787	1.00	14.52
	ATOM	1410	CE1 TYR	244	27.951	53.250	51.158	1.00	16.68
	ATOM	1411	CD2 TYR	244	26.989	53.833	48.627	1.00	16.81
	ATOM	1412	CE2 TYR	244	28.274	54.231	48.988	1.00	16.81
45	ATOM	1413	CZ TYR	244	28.747	53.935	50.255	1.00	16.66
	ATOM	1414	OH TYR	244	30.013	54.329	50.619	1.00	20.02
	ATOM	1415	C TYR	244	22.423	53.462	48.628	1.00	15.50
	ATOM	1416	O TYR	244	21.483	53.254	49.385	1.00	17.45
	ATOM	1417	N VAL	245	22.325	53.308	47.307	1.00	15.80
50	ATOM	1418	CA VAL	245	21.069	52.854	46.713	1.00	15.94
	ATOM	1419	CB VAL	245	20.945	53.283	45.227	1.00	19.25
	ATOM	1420	CG1 VAL	245	20.843	54.804	45.137	1.00	21.35
	ATOM	1421	CG2 VAL	245	22.133	52.795	44.436	1.00	19.37
	ATOM	1422	C VAL	245	20.926	51.335	46.830	1.00	15.52
55	ATOM	1423	O VAL	245	19.810	50.817	46.890	1.00	16.08
	ATOM	1424	N ASP	246	22.057	50.630	46.871	1.00	12.67
	ATOM	1425	CA ASP	246	22.077	49.169	47.017	1.00	12.71
	ATOM	1426	CB ASP	246	21.487	48.477	45.776	1.00	10.13
	ATOM	1427	CG ASP	246	22.273	48.765	44.509	1.00	12.08
60	ATOM	1428	OD1 ASP	246	23.483	48.446	44.453	1.00	15.10
	ATOM	1429	OD2 ASP	246	21.676	49.312	43.561	1.00	15.37

	ATOM	1430	C	ASP	246	23.507	48.677	273	1.00	11.44
	ATOM	1431	O	ASP	246	24.450	49.463	47.236	1.00	12.92
	ATOM	1432	N	ALA	247	23.666	47.381	47.537	1.00	12.55
	ATOM	1433	CA	ALA	247	24.986	46.813	47.819	1.00	12.99
5	ATOM	1434	CB	ALA	247	24.855	45.318	48.148	1.00	12.30
	ATOM	1435	C	ALA	247	26.016	47.011	46.704	1.00	11.82
	ATOM	1436	O	ALA	247	27.204	47.218	46.975	1.00	12.97
	ATOM	1437	N	GLY	248	25.570	46.935	45.453	1.00	10.87
	ATOM	1438	CA	GLY	248	26.484	47.116	44.335	1.00	10.26
10	ATOM	1439	C	GLY	248	27.077	48.512	44.352	1.00	13.13
	ATOM	1440	O	GLY	248	28.277	48.708	44.134	1.00	13.09
	ATOM	1441	N	ASP	249	26.214	49.490	44.606	1.00	14.71
	ATOM	1442	CA	ASP	249	26.615	50.894	44.685	1.00	15.46
	ATOM	1443	CB	ASP	249	25.369	51.744	44.977	1.00	15.97
15	ATOM	1444	CG	ASP	249	25.671	53.226	45.132	1.00	17.81
	ATOM	1445	OD1	ASP	249	26.503	53.765	44.373	1.00	16.36
	ATOM	1446	OD2	ASP	249	25.040	53.856	46.005	1.00	18.13
	ATOM	1447	C	ASP	249	27.652	51.008	45.804	1.00	15.19
	ATOM	1448	O	ASP	249	28.718	51.598	45.626	1.00	14.88
20	ATOM	1449	N	SER	250	27.346	50.418	46.954	1.00	15.48
	ATOM	1450	CA	SER	250	28.267	50.448	48.083	1.00	15.85
	ATOM	1451	CB	SER	250	27.669	49.667	49.257	1.00	18.56
	ATOM	1452	OG	SER	250	28.534	49.703	50.376	1.00	19.16
	ATOM	1453	C	SER	250	29.650	49.877	47.723	1.00	15.52
25	ATOM	1454	O	SER	250	30.680	50.479	48.036	1.00	13.65
	ATOM	1455	N	TRP	251	29.676	48.718	47.065	1.00	14.06
	ATOM	1456	CA	TRP	251	30.945	48.093	46.672	1.00	14.44
	ATOM	1457	CB	TRP	251	30.700	46.698	46.082	1.00	13.11
	ATOM	1458	CG	TRP	251	30.248	45.674	47.075	1.00	14.95
30	ATOM	1459	CD2	TRP	251	30.022	44.282	46.820	1.00	15.48
	ATOM	1460	CE2	TRP	251	29.626	43.691	48.041	1.00	17.39
	ATOM	1461	CE3	TRP	251	30.117	43.477	45.676	1.00	12.92
	ATOM	1462	CD1	TRP	251	29.985	45.868	48.405	1.00	16.16
	ATOM	1463	NE1	TRP	251	29.612	44.680	48.992	1.00	16.30
35	ATOM	1464	CZ2	TRP	251	29.323	42.323	48.151	1.00	16.20
	ATOM	1465	CZ3	TRP	251	29.817	42.120	45.784	1.00	15.52
	ATOM	1466	CH2	TRP	251	29.425	41.558	47.014	1.00	15.29
	ATOM	1467	C	TRP	251	31.735	48.923	45.662	1.00	14.40
	ATOM	1468	O	TRP	251	32.956	49.057	45.776	1.00	11.76
40	ATOM	1469	N	ARG	252	31.043	49.471	44.665	1.00	14.90
	ATOM	1470	CA	ARG	252	31.714	50.272	43.655	1.00	13.31
	ATOM	1471	CB	ARG	252	30.740	50.668	42.528	1.00	14.60
	ATOM	1472	CG	ARG	252	30.243	49.494	41.672	1.00	14.42
	ATOM	1473	CD	ARG	252	29.472	49.970	40.447	1.00	12.08
45	ATOM	1474	NE	ARG	252	28.233	50.687	40.771	1.00	13.50
	ATOM	1475	CZ	ARG	252	27.063	50.107	41.037	1.00	14.82
	ATOM	1476	NH1	ARG	252	26.002	50.854	41.319	1.00	13.27
	ATOM	1477	NH2	ARG	252	26.942	48.783	41.011	1.00	13.16
	ATOM	1478	C	ARG	252	32.337	51.527	44.267	1.00	16.12
50	ATOM	1479	O	ARG	252	33.361	52.004	43.787	1.00	14.85
	ATOM	1480	N	SER	253	31.730	52.050	45.332	1.00	15.54
	ATOM	1481	CA	SER	253	32.239	53.260	45.977	1.00	16.04
	ATOM	1482	CB	SER	253	31.309	53.703	47.112	1.00	16.20
	ATOM	1483	OG	SER	253	31.590	52.997	48.309	1.00	20.61
55	ATOM	1484	C	SER	253	33.652	53.086	46.527	1.00	14.43
	ATOM	1485	O	SER	253	34.339	54.069	46.789	1.00	14.48
	ATOM	1486	N	MET	254	34.085	51.840	46.697	1.00	14.27
	ATOM	1487	CA	MET	254	35.429	51.562	47.209	1.00	16.48
	ATOM	1488	CB	MET	254	35.657	50.051	47.360	1.00	17.80
60	ATOM	1489	CG	MET	254	34.740	49.358	48.359	1.00	21.06
	ATOM	1490	SD	MET	254	35.187	47.614	48.574	1.00	31.02

	ATOM	1491	MET	254	34.226	46.857	47.357	1.00	27.13	
	ATOM	1492	C	MET	254	36.517	52.121	46.298	1.00	15.51
	ATOM	1493	O	MET	254	37.666	52.265	46.714	1.00	16.06
	ATOM	1494	N	TYR	255	36.163	52.423	45.053	1.00	14.88
5	ATOM	1495	CA	TYR	255	37.135	52.956	44.105	1.00	15.20
	ATOM	1496	CB	TYR	255	36.904	52.360	42.704	1.00	15.30
	ATOM	1497	CG	TYR	255	37.206	50.880	42.631	1.00	13.36
	ATOM	1498	CD1	TYR	255	36.245	49.935	42.986	1.00	12.66
	ATOM	1499	CE1	TYR	255	36.544	48.568	43.000	1.00	13.69
10	ATOM	1500	CD2	TYR	255	38.479	50.427	42.281	1.00	12.94
	ATOM	1501	CE2	TYR	255	38.792	49.064	42.293	1.00	14.05
	ATOM	1502	CZ	TYR	255	37.818	48.143	42.659	1.00	13.41
	ATOM	1503	OH	TYR	255	38.129	46.806	42.721	1.00	13.11
	ATOM	1504	C	TYR	255	37.126	54.479	44.023	1.00	14.46
15	ATOM	1505	O	TYR	255	38.000	55.068	43.393	1.00	14.81
	ATOM	1506	N	GLU	256	36.139	55.111	44.654	1.00	15.24
	ATOM	1507	CA	GLU	256	36.028	56.574	44.642	1.00	16.61
	ATOM	1508	CB	GLU	256	37.103	57.195	45.539	1.00	17.37
	ATOM	1509	CG	GLU	256	37.109	56.665	46.966	1.00	22.10
20	ATOM	1510	CD	GLU	256	38.044	57.453	47.878	1.00	23.83
	ATOM	1511	OE1	GLU	256	39.253	57.535	47.579	1.00	26.54
	ATOM	1512	OE2	GLU	256	37.565	57.988	48.894	1.00	26.05
	ATOM	1513	C	GLU	256	36.191	57.103	43.222	1.00	15.97
	ATOM	1514	O	GLU	256	36.852	58.114	42.991	1.00	16.36
25	ATOM	1515	N	THR	257	35.575	56.413	42.273	1.00	16.18
	ATOM	1516	CA	THR	257	35.678	56.786	40.872	1.00	17.13
	ATOM	1517	CB	THR	257	36.628	55.824	40.144	1.00	18.70
	ATOM	1518	OG1	THR	257	37.905	55.848	40.796	1.00	17.37
	ATOM	1519	CG2	THR	257	36.789	56.226	38.679	1.00	17.93
30	ATOM	1520	C	THR	257	34.309	56.761	40.201	1.00	16.00
	ATOM	1521	O	THR	257	33.818	55.707	39.797	1.00	15.27
	ATOM	1522	N	PRO	258	33.673	57.936	40.077	1.00	15.23
	ATOM	1523	CD	PRO	258	34.141	59.242	40.584	1.00	15.95
	ATOM	1524	CA	PRO	258	32.349	58.057	39.456	1.00	15.97
35	ATOM	1525	CB	PRO	258	32.120	59.569	39.426	1.00	16.42
	ATOM	1526	CG	PRO	258	32.851	60.041	40.663	1.00	16.92
	ATOM	1527	C	PRO	258	32.254	57.434	38.064	1.00	15.58
	ATOM	1528	O	PRO	258	31.208	56.909	37.683	1.00	16.29
	ATOM	1529	N	SER	259	33.348	57.487	37.310	1.00	15.31
40	ATOM	1530	CA	SER	259	33.355	56.939	35.953	1.00	15.70
	ATOM	1531	CB	SER	259	34.330	57.740	35.085	1.00	17.61
	ATOM	1532	OG	SER	259	35.657	57.612	35.573	1.00	18.28
	ATOM	1533	C	SER	259	33.728	55.452	35.884	1.00	14.57
	ATOM	1534	O	SER	259	33.917	54.913	34.798	1.00	13.39
45	ATOM	1535	N	LEU	260	33.810	54.790	37.036	1.00	13.86
	ATOM	1536	CA	LEU	260	34.200	53.376	37.094	1.00	14.52
	ATOM	1537	CB	LEU	260	33.936	52.806	38.497	1.00	14.33
	ATOM	1538	CG	LEU	260	34.446	51.379	38.763	1.00	17.84
	ATOM	1539	CD1	LEU	260	35.965	51.348	38.632	1.00	17.38
50	ATOM	1540	CD2	LEU	260	34.033	50.922	40.161	1.00	17.16
	ATOM	1541	C	LEU	260	33.577	52.437	36.056	1.00	13.87
	ATOM	1542	O	LEU	260	34.299	51.777	35.311	1.00	9.84
	ATOM	1543	N	GLU	261	32.248	52.363	36.003	1.00	13.07
	ATOM	1544	CA	GLU	261	31.607	51.448	35.061	1.00	14.77
55	ATOM	1545	CB	GLU	261	30.079	51.514	35.191	1.00	12.37
	ATOM	1546	CG	GLU	261	29.591	51.176	36.596	1.00	15.59
	ATOM	1547	CD	GLU	261	28.174	50.633	36.623	1.00	17.28
	ATOM	1548	OE1	GLU	261	27.524	50.604	35.560	1.00	21.19
	ATOM	1549	OE2	GLU	261	27.714	50.234	37.712	1.00	18.05
60	ATOM	1550	C	GLU	261	32.030	51.664	33.618	1.00	14.11
	ATOM	1551	O	GLU	261	32.295	50.704	32.895	1.00	14.05

	ATOM	1552	N	GLN	262	32.108	52.919	31.200	1.00	15.79
	ATOM	1553	CA	GLN	262	32.522	53.232	31.839	1.00	16.53
	ATOM	1554	CB	GLN	262	32.280	54.712	31.547	1.00	21.41
	ATOM	1555	CG	GLN	262	30.809	55.095	31.459	1.00	27.97
5	ATOM	1556	CD	GLN	262	30.587	56.587	31.641	1.00	32.44
	ATOM	1557	OE1	GLN	262	29.655	57.162	31.077	1.00	34.42
	ATOM	1558	NE2	GLN	262	31.439	57.220	32.447	1.00	33.41
	ATOM	1559	C	GLN	262	34.001	52.901	31.642	1.00	17.20
	ATOM	1560	O	GLN	262	34.382	52.314	30.625	1.00	15.46
10	ATOM	1561	N	ASP	263	34.830	53.280	32.612	1.00	16.67
	ATOM	1562	CA	ASP	263	36.263	53.011	32.524	1.00	15.94
	ATOM	1563	CB	ASP	263	36.998	53.485	33.781	1.00	19.14
	ATOM	1564	CG	ASP	263	37.032	54.998	33.914	1.00	22.47
	ATOM	1565	OD1	ASP	263	37.016	55.698	32.878	1.00	21.52
15	ATOM	1566	OD2	ASP	263	37.097	55.486	35.060	1.00	22.10
	ATOM	1567	C	ASP	263	36.535	51.519	32.346	1.00	16.31
	ATOM	1568	O	ASP	263	37.341	51.121	31.507	1.00	17.06
	ATOM	1569	N	LEU	264	35.866	50.696	33.146	1.00	15.79
	ATOM	1570	CA	LEU	264	36.056	49.251	33.082	1.00	16.11
20	ATOM	1571	CB	LEU	264	35.334	48.585	34.258	1.00	17.87
	ATOM	1572	CG	LEU	264	35.807	49.044	35.641	1.00	18.11
	ATOM	1573	CD1	LEU	264	35.050	48.285	36.717	1.00	19.50
	ATOM	1574	CD2	LEU	264	37.303	48.819	35.781	1.00	19.36
	ATOM	1575	C	LEU	264	35.567	48.667	31.757	1.00	16.10
25	ATOM	1576	O	LEU	264	36.175	47.746	31.215	1.00	14.50
	ATOM	1577	N	GLU	265	34.468	49.206	31.240	1.00	17.12
	ATOM	1578	CA	GLU	265	33.911	48.745	29.970	1.00	18.85
	ATOM	1579	CB	GLU	265	32.571	49.440	29.708	1.00	21.26
	ATOM	1580	CG	GLU	265	31.924	49.123	28.364	1.00	27.69
30	ATOM	1581	CD	GLU	265	31.617	47.648	28.189	1.00	34.09
	ATOM	1582	OE1	GLU	265	31.001	47.050	29.100	1.00	36.70
	ATOM	1583	OE2	GLU	265	31.984	47.087	27.134	1.00	37.08
	ATOM	1584	C	GLU	265	34.890	49.034	28.830	1.00	19.85
	ATOM	1585	O	GLU	265	35.077	48.207	27.935	1.00	19.78
35	ATOM	1586	N	ARG	266	35.515	50.210	28.859	1.00	17.74
	ATOM	1587	CA	ARG	266	36.475	50.567	27.822	1.00	17.75
	ATOM	1588	CB	ARG	266	36.920	52.026	27.970	1.00	20.40
	ATOM	1589	CG	ARG	266	35.885	53.041	27.507	1.00	25.02
	ATOM	1590	CD	ARG	266	36.506	54.424	27.397	1.00	28.27
40	ATOM	1591	NE	ARG	266	36.724	55.042	28.701	1.00	34.44
	ATOM	1592	CZ	ARG	266	35.776	55.660	29.401	1.00	36.31
	ATOM	1593	NH1	ARG	266	34.541	55.747	28.920	1.00	36.59
	ATOM	1594	NH2	ARG	266	36.061	56.191	30.582	1.00	36.92
	ATOM	1595	C	ARG	266	37.686	49.645	27.894	1.00	16.78
45	ATOM	1596	O	ARG	266	38.203	49.206	26.867	1.00	15.67
	ATOM	1597	N	LEU	267	38.140	49.352	29.108	1.00	15.01
	ATOM	1598	CA	LEU	267	39.280	48.459	29.289	1.00	14.82
	ATOM	1599	CB	LEU	267	39.646	48.362	30.773	1.00	16.36
	ATOM	1600	CG	LEU	267	40.160	49.672	31.381	1.00	16.60
50	ATOM	1601	CD1	LEU	267	40.344	49.515	32.884	1.00	16.07
	ATOM	1602	CD2	LEU	267	41.486	50.064	30.709	1.00	15.87
	ATOM	1603	C	LEU	267	38.932	47.076	28.743	1.00	17.23
	ATOM	1604	O	LEU	267	39.737	46.439	28.054	1.00	15.82
	ATOM	1605	N	PHE	268	37.723	46.616	29.046	1.00	15.48
55	ATOM	1606	CA	PHE	268	37.286	45.314	28.569	1.00	16.55
	ATOM	1607	CB	PHE	268	35.879	44.994	29.062	1.00	18.24
	ATOM	1608	CG	PHE	268	35.345	43.707	28.512	1.00	21.70
	ATOM	1609	CD1	PHE	268	35.826	42.488	28.981	1.00	22.36
	ATOM	1610	CD2	PHE	268	34.425	43.711	27.468	1.00	21.62
60	ATOM	1611	CE1	PHE	268	35.403	41.292	28.415	1.00	24.19
	ATOM	1612	CE2	PHE	268	33.996	42.517	26.894	1.00	23.63

	ATOM	1613	PHE	268	34.489	41.306	27.341	1.00	22.93	
	ATOM	1614	C	PHE	268	37.291	45.258	27.043	1.00	17.17
	ATOM	1615	O	PHE	268	37.776	44.295	26.445	1.00	15.21
	ATOM	1616	N	GLN	269	36.739	46.292	26.416	1.00	16.96
5	ATOM	1617	CA	GLN	269	36.677	46.361	24.962	1.00	17.31
	ATOM	1618	CB	GLN	269	35.905	47.606	24.517	1.00	19.68
	ATOM	1619	CG	GLN	269	34.408	47.569	24.831	1.00	24.90
	ATOM	1620	CD	GLN	269	33.706	46.381	24.198	1.00	28.78
	ATOM	1621	OE1	GLN	269	33.938	46.057	23.032	1.00	31.92
10	ATOM	1622	NE2	GLN	269	32.832	45.732	24.960	1.00	30.59
	ATOM	1623	C	GLN	269	38.048	46.354	24.292	1.00	16.49
	ATOM	1624	O	GLN	269	38.197	45.811	23.207	1.00	15.38
	ATOM	1625	N	GLU	270	39.046	46.960	24.926	1.00	16.98
	ATOM	1626	CA	GLU	270	40.386	46.992	24.345	1.00	20.14
15	ATOM	1627	CB	GLU	270	41.288	47.941	25.129	1.00	23.65
	ATOM	1628	CG	GLU	270	40.839	49.382	25.073	1.00	30.06
	ATOM	1629	CD	GLU	270	41.821	50.306	25.743	1.00	35.93
	ATOM	1630	OE1	GLU	270	42.956	50.432	25.234	1.00	40.83
	ATOM	1631	OE2	GLU	270	41.465	50.903	26.779	1.00	39.30
20	ATOM	1632	C	GLU	270	41.032	45.614	24.291	1.00	19.09
	ATOM	1633	O	GLU	270	41.861	45.344	23.420	1.00	17.60
	ATOM	1634	N	LEU	271	40.652	44.745	25.222	1.00	17.35
	ATOM	1635	CA	LEU	271	41.197	43.393	25.269	1.00	18.44
	ATOM	1636	CB	LEU	271	41.356	42.961	26.726	1.00	20.14
25	ATOM	1637	CG	LEU	271	42.655	43.506	27.322	1.00	24.11
	ATOM	1638	CD1	LEU	271	42.449	43.927	28.754	1.00	26.75
	ATOM	1639	CD2	LEU	271	43.731	42.429	27.210	1.00	25.08
	ATOM	1640	C	LEU	271	40.366	42.366	24.495	1.00	18.59
	ATOM	1641	O	LEU	271	40.722	41.188	24.434	1.00	17.40
30	ATOM	1642	N	GLN	272	39.270	42.818	23.894	1.00	18.72
	ATOM	1643	CA	GLN	272	38.395	41.941	23.117	1.00	21.08
	ATOM	1644	CB	GLN	272	37.207	42.734	22.565	1.00	22.80
	ATOM	1645	CG	GLN	272	35.993	42.745	23.461	1.00	24.90
	ATOM	1646	CD	GLN	272	35.383	41.367	23.607	1.00	27.57
35	ATOM	1647	OE1	GLN	272	35.940	40.495	24.274	1.00	28.36
	ATOM	1648	NE2	GLN	272	34.235	41.161	22.973	1.00	28.83
	ATOM	1649	C	GLN	272	39.098	41.233	21.960	1.00	21.24
	ATOM	1650	O	GLN	272	39.024	40.010	21.835	1.00	23.38
	ATOM	1651	N	PRO	273	39.783	41.992	21.091	1.00	21.84
40	ATOM	1652	CD	PRO	273	39.893	43.462	21.019	1.00	22.66
	ATOM	1653	CA	PRO	273	40.476	41.364	19.961	1.00	22.92
	ATOM	1654	CB	PRO	273	41.237	42.531	19.336	1.00	23.77
	ATOM	1655	CG	PRO	273	40.304	43.685	19.570	1.00	21.85
	ATOM	1656	C	PRO	273	41.398	40.223	20.381	1.00	22.91
45	ATOM	1657	O	PRO	273	41.432	39.162	19.745	1.00	23.26
	ATOM	1658	N	LEU	274	42.142	40.442	21.457	1.00	22.09
	ATOM	1659	CA	LEU	274	43.062	39.433	21.951	1.00	19.44
	ATOM	1660	CB	LEU	274	43.971	40.044	23.017	1.00	21.98
	ATOM	1661	CG	LEU	274	45.175	39.249	23.520	1.00	26.32
50	ATOM	1662	CD1	LEU	274	45.869	38.537	22.366	1.00	25.68
	ATOM	1663	CD2	LEU	274	46.138	40.216	24.215	1.00	26.73
	ATOM	1664	C	LEU	274	42.294	38.234	22.511	1.00	18.52
	ATOM	1665	O	LEU	274	42.607	37.087	22.186	1.00	16.12
	ATOM	1666	N	TYR	275	41.286	38.487	23.345	1.00	15.05
55	ATOM	1667	CA	TYR	275	40.520	37.376	23.897	1.00	16.26
	ATOM	1668	CB	TYR	275	39.462	37.844	24.898	1.00	14.51
	ATOM	1669	CG	TYR	275	38.655	36.674	25.425	1.00	15.81
	ATOM	1670	CD1	TYR	275	39.259	35.687	26.205	1.00	14.55
	ATOM	1671	CE1	TYR	275	38.550	34.567	26.627	1.00	15.08
60	ATOM	1672	CD2	TYR	275	37.313	36.512	25.082	1.00	15.17
	ATOM	1673	CE2	TYR	275	36.592	35.394	25.499	1.00	14.87

	ATOM	1674	CZ	TYR	275	37.217	34.427	26.271	1.00	13.90
	ATOM	1675	OH	TYR	275	36.513	33.326	26.697	1.00	13.75
	ATOM	1676	C	TYR	275	39.816	36.576	22.801	1.00	14.63
	ATOM	1677	O	TYR	275	39.852	35.346	22.803	1.00	13.73
5	ATOM	1678	N	LEU	276	39.174	37.268	21.865	1.00	14.03
	ATOM	1679	CA	LEU	276	38.458	36.567	20.799	1.00	15.37
	ATOM	1680	CB	LEU	276	37.718	37.563	19.906	1.00	15.87
	ATOM	1681	CG	LEU	276	36.570	38.318	20.588	1.00	18.77
	ATOM	1682	CD1	LEU	276	35.991	39.340	19.620	1.00	17.96
10	ATOM	1683	CD2	LEU	276	35.494	37.336	21.039	1.00	19.76
	ATOM	1684	C	LEU	276	39.381	35.691	19.960	1.00	15.77
	ATOM	1685	O	LEU	276	38.986	34.612	19.513	1.00	15.97
	ATOM	1686	N	ASN	277	40.609	36.151	19.740	1.00	13.92
	ATOM	1687	CA	ASN	277	41.558	35.367	18.965	1.00	14.44
15	ATOM	1688	CB	ASN	277	42.734	36.239	18.528	1.00	14.75
	ATOM	1689	CG	ASN	277	42.463	36.954	17.219	1.00	17.20
	ATOM	1690	OD1	ASN	277	42.442	36.330	16.157	1.00	16.39
	ATOM	1691	ND2	ASN	277	42.239	38.266	17.288	1.00	16.71
	ATOM	1692	C	ASN	277	42.044	34.158	19.760	1.00	14.54
20	ATOM	1693	O	ASN	277	42.272	33.090	19.199	1.00	12.53
	ATOM	1694	N	LEU	278	42.192	34.319	21.071	1.00	12.24
	ATOM	1695	CA	LEU	278	42.635	33.204	21.900	1.00	13.24
	ATOM	1696	CB	LEU	278	42.986	33.691	23.311	1.00	12.96
	ATOM	1697	CG	LEU	278	43.378	32.597	24.310	1.00	12.38
25	ATOM	1698	CD1	LEU	278	44.717	31.969	23.898	1.00	12.63
	ATOM	1699	CD2	LEU	278	43.484	33.201	25.713	1.00	14.10
	ATOM	1700	C	LEU	278	41.507	32.173	21.972	1.00	12.49
	ATOM	1701	O	LEU	278	41.747	30.969	21.906	1.00	10.75
	ATOM	1702	N	HIS	279	40.280	32.669	22.111	1.00	12.22
30	ATOM	1703	CA	HIS	279	39.080	31.837	22.190	1.00	13.07
	ATOM	1704	CB	HIS	279	37.847	32.740	22.333	1.00	11.98
	ATOM	1705	CG	HIS	279	36.539	32.007	22.308	1.00	12.16
	ATOM	1706	CD2	HIS	279	35.775	31.586	21.273	1.00	9.43
	ATOM	1707	ND1	HIS	279	35.844	31.678	23.454	1.00	14.66
35	ATOM	1708	CE1	HIS	279	34.707	31.091	23.126	1.00	10.50
	ATOM	1709	NE2	HIS	279	34.641	31.022	21.808	1.00	16.46
	ATOM	1710	C	HIS	279	38.946	30.972	20.936	1.00	13.49
	ATOM	1711	O	HIS	279	38.766	29.759	21.026	1.00	14.71
	ATOM	1712	N	ALA	280	39.037	31.603	19.769	1.00	11.17
40	ATOM	1713	CA	ALA	280	38.918	30.891	18.501	1.00	12.70
	ATOM	1714	CB	ALA	280	38.966	31.887	17.342	1.00	11.01
	ATOM	1715	C	ALA	280	40.010	29.828	18.328	1.00	13.11
	ATOM	1716	O	ALA	280	39.752	28.728	17.828	1.00	14.49
	ATOM	1717	N	TYR	281	41.231	30.161	18.734	1.00	14.23
45	ATOM	1718	CA	TYR	281	42.349	29.230	18.624	1.00	14.13
	ATOM	1719	CB	TYR	281	43.658	29.942	18.979	1.00	13.18
	ATOM	1720	CG	TYR	281	44.863	29.030	19.022	1.00	15.59
	ATOM	1721	CD1	TYR	281	45.465	28.571	17.849	1.00	16.24
	ATOM	1722	CE1	TYR	281	46.565	27.709	17.889	1.00	16.63
50	ATOM	1723	CD2	TYR	281	45.390	28.609	20.239	1.00	14.46
	ATOM	1724	CE2	TYR	281	46.482	27.753	20.291	1.00	19.39
	ATOM	1725	CZ	TYR	281	47.065	27.305	19.114	1.00	18.64
	ATOM	1726	OH	TYR	281	48.143	26.448	19.182	1.00	19.16
	ATOM	1727	C	TYR	281	42.142	28.025	19.544	1.00	14.20
55	ATOM	1728	O	TYR	281	42.339	26.876	19.140	1.00	12.95
	ATOM	1729	N	VAL	282	41.747	28.291	20.785	1.00	13.42
	ATOM	1730	CA	VAL	282	41.514	27.217	21.744	1.00	13.04
	ATOM	1731	CB	VAL	282	41.263	27.790	23.156	1.00	12.69
	ATOM	1732	CG1	VAL	282	40.806	26.681	24.113	1.00	10.82
60	ATOM	1733	CG2	VAL	282	42.544	28.439	23.674	1.00	11.44
	ATOM	1734	C	VAL	282	40.328	26.351	21.309	1.00	13.40

	ATOM	173	VAL	282	40.356	25.129	21.161	1.00	12.76
	ATOM	1736	N ARG	283	39.294	26.989	20.770	1.00	12.27
	ATOM	1737	CA ARG	283	38.112	26.276	20.301	1.00	12.41
	ATOM	1738	CB ARG	283	37.073	27.280	19.788	1.00	10.58
5	ATOM	1739	CG ARG	283	35.801	26.655	19.227	1.00	10.97
	ATOM	1740	CD ARG	283	34.793	27.732	18.829	1.00	11.14
	ATOM	1741	NE ARG	283	35.374	28.708	17.911	1.00	12.22
	ATOM	1742	CZ ARG	283	34.815	29.873	17.593	1.00	14.58
	ATOM	1743	NH1 ARG	283	33.647	30.225	18.119	1.00	12.82
10	ATOM	1744	NH2 ARG	283	35.431	30.691	16.744	1.00	13.94
	ATOM	1745	C ARG	283	38.497	25.290	19.189	1.00	15.02
	ATOM	1746	O ARG	283	37.973	24.174	19.121	1.00	14.50
	ATOM	1747	N ARG	284	39.415	25.705	18.320	1.00	15.37
	ATOM	1748	CA ARG	284	39.865	24.842	17.231	1.00	16.53
15	ATOM	1749	CB ARG	284	40.791	25.619	16.289	1.00	15.14
	ATOM	1750	CG ARG	284	41.532	24.771	15.262	1.00	17.18
	ATOM	1751	CD ARG	284	40.608	24.186	14.201	1.00	17.98
	ATOM	1752	NE ARG	284	39.899	25.226	13.458	1.00	17.50
	ATOM	1753	CZ ARG	284	39.121	24.987	12.406	1.00	20.20
20	ATOM	1754	NH1 ARG	284	38.505	25.989	11.789	1.00	17.52
	ATOM	1755	NH2 ARG	284	38.967	23.742	11.963	1.00	18.66
	ATOM	1756	C ARG	284	40.592	23.615	17.793	1.00	17.62
	ATOM	1757	O ARG	284	40.369	22.490	17.340	1.00	16.82
	ATOM	1758	N ALA	285	41.456	23.838	18.782	1.00	16.05
25	ATOM	1759	CA ALA	285	42.213	22.751	19.400	1.00	16.40
	ATOM	1760	CB ALA	285	43.247	23.312	20.369	1.00	15.81
	ATOM	1761	C ALA	285	41.288	21.770	20.122	1.00	17.14
	ATOM	1762	O ALA	285	41.527	20.560	20.111	1.00	15.20
	ATOM	1763	N LEU	286	40.237	22.289	20.748	1.00	14.27
30	ATOM	1764	CA LEU	286	39.285	21.428	21.449	1.00	16.86
	ATOM	1765	CB LEU	286	38.331	22.266	22.301	1.00	15.32
	ATOM	1766	CG LEU	286	38.945	22.925	23.542	1.00	17.90
	ATOM	1767	CD1 LEU	286	37.887	23.785	24.230	1.00	15.75
	ATOM	1768	CD2 LEU	286	39.470	21.850	24.505	1.00	13.91
35	ATOM	1769	C LEU	286	38.502	20.615	20.422	1.00	17.67
	ATOM	1770	O LEU	286	38.172	19.452	20.651	1.00	17.19
	ATOM	1771	N HIS	287	38.212	21.245	19.286	1.00	16.68
	ATOM	1772	CA HIS	287	37.494	20.601	18.196	1.00	18.26
	ATOM	1773	CB HIS	287	37.292	21.621	17.062	1.00	18.41
40	ATOM	1774	CG HIS	287	36.648	21.061	15.831	1.00	18.72
	ATOM	1775	CD2 HIS	287	35.373	21.137	15.380	1.00	17.00
	ATOM	1776	ND1 HIS	287	37.351	20.359	14.875	1.00	18.34
	ATOM	1777	CE1 HIS	287	36.537	20.031	13.887	1.00	14.90
	ATOM	1778	NE2 HIS	287	35.332	20.492	14.169	1.00	16.90
45	ATOM	1779	C HIS	287	38.361	19.421	17.740	1.00	19.03
	ATOM	1780	O HIS	287	37.866	18.327	17.471	1.00	17.36
	ATOM	1781	N ARG	288	39.666	19.659	17.700	1.00	18.55
	ATOM	1782	CA ARG	288	40.649	18.662	17.295	1.00	20.61
	ATOM	1783	CB ARG	288	42.028	19.320	17.254	1.00	23.74
50	ATOM	1784	CG ARG	288	42.870	19.014	16.032	1.00	30.47
	ATOM	1785	CD ARG	288	43.922	20.102	15.857	1.00	33.76
	ATOM	1786	NE ARG	288	44.686	20.306	17.083	1.00	33.81
	ATOM	1787	CZ ARG	288	45.113	21.487	17.514	1.00	35.70
	ATOM	1788	NH1 ARG	288	44.852	22.587	16.817	1.00	35.23
55	ATOM	1789	NH2 ARG	288	45.800	21.569	18.646	1.00	36.87
	ATOM	1790	C ARG	288	40.679	17.468	18.253	1.00	20.35
	ATOM	1791	O ARG	288	40.773	16.314	17.825	1.00	19.01
	ATOM	1792	N HIS	289	40.586	17.747	19.550	1.00	19.12
	ATOM	1793	CA HIS	289	40.641	16.692	20.559	1.00	20.16
60	ATOM	1794	CB HIS	289	41.247	17.230	21.858	1.00	21.21
	ATOM	1795	CG HIS	289	41.407	16.184	22.916	1.00	23.81

	ATOM	1796	CD2	HIS	289	40.632	15.866	22.980	1.00	24.22
	ATOM	1797	ND1	HIS	289	42.440	15.270	22.909	1.00	26.00
	ATOM	1798	CE1	HIS	289	42.292	14.433	23.921	1.00	24.08
	ATOM	1799	NE2	HIS	289	41.202	14.772	24.585	1.00	27.58
5	ATOM	1800	C	HIS	289	39.327	15.997	20.903	1.00	20.43
	ATOM	1801	O	HIS	289	39.276	14.768	20.978	1.00	20.43
	ATOM	1802	N	TYR	290	38.270	16.772	21.123	1.00	19.15
	ATOM	1803	CA	TYR	290	36.990	16.194	21.503	1.00	18.20
	ATOM	1804	CB	TYR	290	36.298	17.098	22.527	1.00	17.79
10	ATOM	1805	CG	TYR	290	37.025	17.158	23.859	1.00	17.11
	ATOM	1806	CD1	TYR	290	37.840	18.242	24.188	1.00	14.34
	ATOM	1807	CE1	TYR	290	38.538	18.284	25.403	1.00	15.63
	ATOM	1808	CD2	TYR	290	36.922	16.111	24.778	1.00	17.43
	ATOM	1809	CE2	TYR	290	37.616	16.140	25.990	1.00	16.23
15	ATOM	1810	CZ	TYR	290	38.421	17.227	26.296	1.00	17.84
	ATOM	1811	OH	TYR	290	39.117	17.242	27.485	1.00	16.73
	ATOM	1812	C	TYR	290	36.026	15.842	20.375	1.00	19.53
	ATOM	1813	O	TYR	290	34.985	15.235	20.624	1.00	19.64
	ATOM	1814	N	GLY	291	36.359	16.224	19.145	1.00	19.76
20	ATOM	1815	CA	GLY	291	35.503	15.890	18.017	1.00	19.38
	ATOM	1816	C	GLY	291	34.552	16.967	17.537	1.00	17.77
	ATOM	1817	O	GLY	291	34.058	17.772	18.317	1.00	16.36
	ATOM	1818	N	ALA	292	34.279	16.958	16.237	1.00	18.00
	ATOM	1819	CA	ALA	292	33.392	17.939	15.620	1.00	17.85
25	ATOM	1820	CB	ALA	292	33.401	17.757	14.094	1.00	18.60
	ATOM	1821	C	ALA	292	31.961	17.871	16.142	1.00	17.75
	ATOM	1822	O	ALA	292	31.235	18.859	16.095	1.00	17.45
	ATOM	1823	N	GLN	293	31.548	16.705	16.631	1.00	17.76
	ATOM	1824	CA	GLN	293	30.194	16.544	17.149	1.00	17.65
30	ATOM	1825	CB	GLN	293	29.845	15.053	17.276	1.00	19.36
	ATOM	1826	CG	GLN	293	29.784	14.287	15.947	1.00	18.52
	ATOM	1827	CD	GLN	293	28.512	14.554	15.153	1.00	19.88
	ATOM	1828	OE1	GLN	293	27.616	15.264	15.606	1.00	19.17
	ATOM	1829	NE2	GLN	293	28.428	13.973	13.959	1.00	18.08
35	ATOM	1830	C	GLN	293	30.005	17.229	18.503	1.00	18.04
	ATOM	1831	O	GLN	293	28.873	17.405	18.960	1.00	17.48
	ATOM	1832	N	HIS	294	31.105	17.630	19.137	1.00	16.33
	ATOM	1833	CA	HIS	294	31.021	18.277	20.446	1.00	17.25
	ATOM	1834	CB	HIS	294	31.784	17.445	21.478	1.00	18.66
40	ATOM	1835	CG	HIS	294	31.345	16.014	21.532	1.00	21.25
	ATOM	1836	CD2	HIS	294	31.954	14.879	21.111	1.00	21.69
	ATOM	1837	ND1	HIS	294	30.114	15.631	22.021	1.00	22.71
	ATOM	1838	CE1	HIS	294	29.982	14.322	21.894	1.00	23.73
	ATOM	1839	NE2	HIS	294	31.084	13.842	21.344	1.00	24.62
45	ATOM	1840	C	HIS	294	31.519	19.720	20.480	1.00	18.08
	ATOM	1841	O	HIS	294	31.356	20.409	21.488	1.00	19.39
	ATOM	1842	N	ILE	295	32.122	20.180	19.387	1.00	17.59
	ATOM	1843	CA	ILE	295	32.625	21.552	19.323	1.00	17.39
	ATOM	1844	CB	ILE	295	34.177	21.600	19.335	1.00	18.25
50	ATOM	1845	CG2	ILE	295	34.650	23.050	19.161	1.00	19.44
	ATOM	1846	CG1	ILE	295	34.724	20.998	20.634	1.00	19.74
	ATOM	1847	CD1	ILE	295	34.452	21.827	21.889	1.00	19.50
	ATOM	1848	C	ILE	295	32.150	22.259	18.060	1.00	15.69
	ATOM	1849	O	ILE	295	32.467	21.836	16.948	1.00	16.28
55	ATOM	1850	N	ASN	296	31.381	23.328	18.234	1.00	14.98
	ATOM	1851	CA	ASN	296	30.896	24.112	17.105	1.00	17.48
	ATOM	1852	CB	ASN	296	29.559	24.766	17.450	1.00	18.21
	ATOM	1853	CG	ASN	296	28.995	25.586	16.304	1.00	20.95
	ATOM	1854	OD1	ASN	296	29.639	25.764	15.271	1.00	18.66
60	ATOM	1855	ND2	ASN	296	27.786	26.096	16.487	1.00	24.30
	ATOM	1856	C	ASN	296	31.946	25.194	16.840	1.00	17.45

	ATOM	1857	ASN	296	32.135	26.091	17.802	1.00	17.17
	ATOM	1858	N LEU	297	32.621	25.105	15.697	1.00	15.65
	ATOM	1859	CA LEU	297	33.670	26.060	15.333	1.00	17.18
	ATOM	1860	CB LEU	297	34.357	25.613	14.042	1.00	15.85
5	ATOM	1861	CG LEU	297	35.202	24.338	14.136	1.00	15.74
	ATOM	1862	CD1 LEU	297	35.632	23.934	12.741	1.00	17.98
	ATOM	1863	CD2 LEU	297	36.415	24.565	15.032	1.00	15.34
	ATOM	1864	C LEU	297	33.192	27.502	15.182	1.00	17.65
	ATOM	1865	O LEU	297	34.006	28.418	15.037	1.00	15.95
10	ATOM	1866	N GLU	298	31.877	27.702	15.214	1.00	17.41
	ATOM	1867	CA GLU	298	31.311	29.041	15.101	1.00	19.65
	ATOM	1868	CB GLU	298	30.460	29.158	13.830	1.00	22.80
	ATOM	1869	CG GLU	298	31.163	28.684	12.570	1.00	27.54
	ATOM	1870	CD GLU	298	30.365	28.977	11.309	1.00	31.19
15	ATOM	1871	OE1 GLU	298	29.148	28.692	11.282	1.00	32.45
	ATOM	1872	OE2 GLU	298	30.961	29.488	10.342	1.00	32.93
	ATOM	1873	C GLU	298	30.445	29.366	16.317	1.00	18.22
	ATOM	1874	O GLU	298	29.660	30.318	16.294	1.00	20.41
	ATOM	1875	N GLY	299	30.588	28.581	17.381	1.00	14.98
20	ATOM	1876	CA GLY	299	29.785	28.818	18.567	1.00	12.99
	ATOM	1877	C GLY	299	30.562	28.885	19.867	1.00	13.29
	ATOM	1878	O GLY	299	31.793	28.909	19.858	1.00	13.77
	ATOM	1879	N PRO	300	29.864	28.918	21.014	1.00	14.38
	ATOM	1880	CD PRO	300	28.397	28.934	21.180	1.00	14.36
25	ATOM	1881	CA PRO	300	30.539	28.982	22.311	1.00	15.04
	ATOM	1882	CB PRO	300	29.411	29.353	23.263	1.00	15.56
	ATOM	1883	CG PRO	300	28.232	28.651	22.661	1.00	16.94
	ATOM	1884	C PRO	300	31.217	27.660	22.676	1.00	15.92
	ATOM	1885	O PRO	300	30.914	26.614	22.100	1.00	14.68
30	ATOM	1886	N ILE	301	32.131	27.724	23.639	1.00	14.52
	ATOM	1887	CA ILE	301	32.885	26.560	24.090	1.00	13.49
	ATOM	1888	CB ILE	301	34.345	26.958	24.416	1.00	14.98
	ATOM	1889	CG2 ILE	301	35.104	25.763	25.013	1.00	13.64
	ATOM	1890	CG1 ILE	301	35.033	27.492	23.158	1.00	15.50
35	ATOM	1891	CD1 ILE	301	36.413	28.053	23.409	1.00	14.09
	ATOM	1892	C ILE	301	32.275	25.957	25.351	1.00	13.55
	ATOM	1893	O ILE	301	31.946	26.681	26.288	1.00	9.28
	ATOM	1894	N PRO	302	32.097	24.623	25.380	1.00	12.22
	ATOM	1895	CD PRO	302	32.236	23.667	24.271	1.00	12.83
40	ATOM	1896	CA PRO	302	31.528	23.966	26.562	1.00	13.66
	ATOM	1897	CB PRO	302	31.608	22.487	26.200	1.00	12.81
	ATOM	1898	CG PRO	302	31.360	22.510	24.733	1.00	13.21
	ATOM	1899	C PRO	302	32.387	24.325	27.777	1.00	12.95
	ATOM	1900	O PRO	302	33.606	24.133	27.772	1.00	10.63
45	ATOM	1901	N ALA	303	31.731	24.835	28.814	1.00	13.88
	ATOM	1902	CA ALA	303	32.386	25.304	30.033	1.00	13.20
	ATOM	1903	CB ALA	303	31.348	25.984	30.917	1.00	12.25
	ATOM	1904	C ALA	303	33.197	24.326	30.876	1.00	14.39
	ATOM	1905	O ALA	303	33.897	24.752	31.798	1.00	14.70
50	ATOM	1906	N HIS	304	33.125	23.032	30.583	1.00	13.10
	ATOM	1907	CA HIS	304	33.861	22.065	31.391	1.00	15.86
	ATOM	1908	CB HIS	304	32.972	20.847	31.673	1.00	14.23
	ATOM	1909	CG HIS	304	32.622	20.057	30.448	1.00	16.26
	ATOM	1910	CD2 HIS	304	32.663	18.725	30.202	1.00	14.69
55	ATOM	1911	ND1 HIS	304	32.138	20.644	29.297	1.00	16.27
	ATOM	1912	CE1 HIS	304	31.896	19.708	28.396	1.00	16.80
	ATOM	1913	NE2 HIS	304	32.205	18.534	28.920	1.00	16.57
	ATOM	1914	C HIS	304	35.175	21.596	30.772	1.00	15.34
	ATOM	1915	O HIS	304	35.876	20.776	31.362	1.00	13.95
60	ATOM	1916	N LEU	305	35.519	22.136	29.605	1.00	14.97
	ATOM	1917	CA LEU	305	36.725	21.716	28.891	1.00	14.04

	ATOM	1918	CB	LEU	305	36.383	21.531	27.405	1.00	12.83
	ATOM	1919	CG	LEU	305	35.144	20.690	27.076	1.00	12.75
	ATOM	1920	CD1	LEU	305	34.877	20.727	25.564	1.00	9.86
	ATOM	1921	CD2	LEU	305	35.367	19.260	27.559	1.00	10.56
5	ATOM	1922	C	LEU	305	37.947	22.624	28.991	1.00	15.10
	ATOM	1923	O	LEU	305	38.921	22.424	28.262	1.00	16.46
	ATOM	1924	N	LEU	306	37.925	23.602	29.889	1.00	14.31
	ATOM	1925	CA	LEU	306	39.047	24.527	29.972	1.00	15.42
	ATOM	1926	CB	LEU	306	38.524	25.972	30.053	1.00	13.51
10	ATOM	1927	CG	LEU	306	37.764	26.550	28.848	1.00	14.73
	ATOM	1928	CD1	LEU	306	38.592	26.362	27.577	1.00	14.30
	ATOM	1929	CD2	LEU	306	36.410	25.870	28.694	1.00	15.38
	ATOM	1930	C	LEU	306	40.080	24.275	31.070	1.00	15.84
	ATOM	1931	O	LEU	306	40.937	25.124	31.313	1.00	15.82
15	ATOM	1932	N	GLY	307	39.997	23.120	31.728	1.00	16.01
	ATOM	1933	CA	GLY	307	40.967	22.766	32.758	1.00	15.85
	ATOM	1934	C	GLY	307	40.780	23.392	34.126	1.00	16.19
	ATOM	1935	O	GLY	307	41.595	23.195	35.035	1.00	14.81
	ATOM	1936	N	ASN	308	39.692	24.137	34.275	1.00	15.62
20	ATOM	1937	CA	ASN	308	39.381	24.815	35.522	1.00	15.37
	ATOM	1938	CB	ASN	308	39.878	26.265	35.430	1.00	14.32
	ATOM	1939	CG	ASN	308	39.391	27.132	36.570	1.00	15.28
	ATOM	1940	OD1	ASN	308	38.277	27.654	36.530	1.00	15.45
	ATOM	1941	ND2	ASN	308	40.226	27.292	37.598	1.00	13.64
25	ATOM	1942	C	ASN	308	37.869	24.734	35.769	1.00	14.00
	ATOM	1943	O	ASN	308	37.072	24.858	34.842	1.00	12.08
	ATOM	1944	N	MET	309	37.486	24.519	37.023	1.00	13.86
	ATOM	1945	CA	MET	309	36.077	24.368	37.390	1.00	14.00
	ATOM	1946	CB	MET	309	35.951	24.234	38.916	1.00	14.12
30	ATOM	1947	CG	MET	309	34.527	24.008	39.414	1.00	15.15
	ATOM	1948	SD	MET	309	33.787	22.492	38.767	1.00	16.63
	ATOM	1949	CE	MET	309	34.428	21.288	39.947	1.00	16.22
	ATOM	1950	C	MET	309	35.155	25.478	36.884	1.00	14.78
	ATOM	1951	O	MET	309	33.996	25.220	36.548	1.00	13.18
35	ATOM	1952	N	TRP	310	35.671	26.703	36.812	1.00	11.51
	ATOM	1953	CA	TRP	310	34.872	27.843	36.366	1.00	14.25
	ATOM	1954	CB	TRP	310	34.970	28.968	37.403	1.00	12.20
	ATOM	1955	CG	TRP	310	34.625	28.480	38.772	1.00	12.52
	ATOM	1956	CD2	TRP	310	35.538	27.959	39.745	1.00	12.82
40	ATOM	1957	CE2	TRP	310	34.764	27.461	40.817	1.00	13.24
	ATOM	1958	CE3	TRP	310	36.937	27.855	39.810	1.00	13.78
	ATOM	1959	CD1	TRP	310	33.373	28.295	39.283	1.00	11.84
	ATOM	1960	NE1	TRP	310	33.447	27.681	40.509	1.00	12.66
	ATOM	1961	CZ2	TRP	310	35.340	26.866	41.948	1.00	12.55
45	ATOM	1962	CZ3	TRP	310	37.513	27.260	40.934	1.00	13.31
	ATOM	1963	CH2	TRP	310	36.708	26.773	41.990	1.00	12.52
	ATOM	1964	C	TRP	310	35.309	28.360	35.001	1.00	13.97
	ATOM	1965	O	TRP	310	34.772	29.348	34.508	1.00	12.98
	ATOM	1966	N	ALA	311	36.269	27.670	34.388	1.00	14.15
50	ATOM	1967	CA	ALA	311	36.799	28.086	33.096	1.00	13.77
	ATOM	1968	CB	ALA	311	35.719	27.964	32.021	1.00	14.05
	ATOM	1969	C	ALA	311	37.297	29.534	33.179	1.00	13.58
	ATOM	1970	O	ALA	311	37.249	30.263	32.189	1.00	13.90
	ATOM	1971	N	GLN	312	37.761	29.952	34.358	1.00	13.19
55	ATOM	1972	CA	GLN	312	38.247	31.325	34.541	1.00	13.69
	ATOM	1973	CB	GLN	312	38.088	31.770	36.000	1.00	12.28
	ATOM	1974	CG	GLN	312	38.917	30.995	36.999	1.00	14.52
	ATOM	1975	CD	GLN	312	38.542	31.318	38.433	1.00	17.57
	ATOM	1976	OE1	GLN	312	37.382	31.187	38.828	1.00	15.61
60	ATOM	1977	NE2	GLN	312	39.522	31.739	39.220	1.00	19.96
	ATOM	1978	C	GLN	312	39.700	31.485	34.102	1.00	13.47

	ATOM	1979	GLN	312	40.137	32.587	33.771	1.00	11.19	
	ATOM	1980	N	THR	313	40.442	30.382	34.124	1.00	12.33
	ATOM	1981	CA	THR	313	41.835	30.354	33.687	1.00	13.83
	ATOM	1982	CB	THR	313	42.826	30.403	34.875	1.00	16.20
5	ATOM	1983	OG1	THR	313	42.468	29.425	35.858	1.00	16.40
	ATOM	1984	CG2	THR	313	42.819	31.789	35.511	1.00	17.20
	ATOM	1985	C	THR	313	41.964	29.040	32.918	1.00	16.52
	ATOM	1986	O	THR	313	41.415	28.021	33.335	1.00	14.73
	ATOM	1987	N	TRP	314	42.675	29.065	31.795	1.00	14.06
10	ATOM	1988	CA	TRP	314	42.788	27.881	30.948	1.00	15.86
	ATOM	1989	CB	TRP	314	42.318	28.216	29.529	1.00	15.32
	ATOM	1990	CG	TRP	314	40.991	28.934	29.408	1.00	13.99
	ATOM	1991	CD2	TRP	314	40.457	29.529	28.219	1.00	13.70
	ATOM	1992	CE2	TRP	314	39.164	30.012	28.534	1.00	14.95
15	ATOM	1993	CE3	TRP	314	40.943	29.698	26.915	1.00	12.93
	ATOM	1994	CD1	TRP	314	40.032	29.079	30.372	1.00	14.30
	ATOM	1995	NE1	TRP	314	38.929	29.725	29.854	1.00	13.72
	ATOM	1996	CZ2	TRP	314	38.355	30.650	27.592	1.00	13.70
	ATOM	1997	CZ3	TRP	314	40.137	30.332	25.979	1.00	16.03
20	ATOM	1998	CH2	TRP	314	38.853	30.800	26.325	1.00	16.16
	ATOM	1999	C	TRP	314	44.171	27.255	30.816	1.00	17.18
	ATOM	2000	O	TRP	314	44.363	26.402	29.950	1.00	16.26
	ATOM	2001	N	SER	315	45.125	27.655	31.648	1.00	16.81
	ATOM	2002	CA	SER	315	46.482	27.131	31.514	1.00	18.73
25	ATOM	2003	CB	SER	315	47.429	27.840	32.493	1.00	19.48
	ATOM	2004	OG	SER	315	47.078	27.573	33.834	1.00	23.23
	ATOM	2005	C	SER	315	46.628	25.618	31.658	1.00	17.43
	ATOM	2006	O	SER	315	47.599	25.043	31.165	1.00	16.20
	ATOM	2007	N	ASN	316	45.669	24.967	32.309	1.00	16.52
30	ATOM	2008	CA	ASN	316	45.758	23.526	32.487	1.00	16.72
	ATOM	2009	CB	ASN	316	44.827	23.068	33.617	1.00	16.47
	ATOM	2010	CG	ASN	316	45.342	23.494	34.991	1.00	18.32
	ATOM	2011	OD1	ASN	316	46.504	23.262	35.323	1.00	19.09
	ATOM	2012	ND2	ASN	316	44.484	24.116	35.788	1.00	15.86
35	ATOM	2013	C	ASN	316	45.540	22.700	31.219	1.00	17.50
	ATOM	2014	O	ASN	316	45.834	21.508	31.210	1.00	17.87
	ATOM	2015	N	ILE	317	45.028	23.311	30.150	1.00	17.39
	ATOM	2016	CA	ILE	317	44.869	22.568	28.901	1.00	17.13
	ATOM	2017	CB	ILE	317	43.479	22.759	28.246	1.00	16.82
40	ATOM	2018	CG2	ILE	317	42.394	22.220	29.170	1.00	16.53
	ATOM	2019	CG1	ILE	317	43.242	24.230	27.902	1.00	17.65
	ATOM	2020	CD1	ILE	317	42.036	24.444	27.019	1.00	18.86
	ATOM	2021	C	ILE	317	45.947	23.014	27.915	1.00	18.07
	ATOM	2022	O	ILE	317	45.793	22.892	26.697	1.00	16.69
45	ATOM	2023	N	TYR	318	47.047	23.536	28.454	1.00	18.93
	ATOM	2024	CA	TYR	318	48.155	23.983	27.618	1.00	20.39
	ATOM	2025	CB	TYR	318	49.337	24.421	28.479	1.00	21.07
	ATOM	2026	CG	TYR	318	50.567	24.757	27.667	1.00	23.88
	ATOM	2027	CD1	TYR	318	50.635	25.931	26.917	1.00	22.79
50	ATOM	2028	CE1	TYR	318	51.749	26.225	26.138	1.00	25.90
	ATOM	2029	CD2	TYR	318	51.652	23.879	27.618	1.00	25.81
	ATOM	2030	CE2	TYR	318	52.774	24.163	26.841	1.00	26.76
	ATOM	2031	CZ	TYR	318	52.815	25.335	26.105	1.00	27.14
	ATOM	2032	OH	TYR	318	53.919	25.616	25.338	1.00	27.90
55	ATOM	2033	C	TYR	318	48.609	22.861	26.682	1.00	20.54
	ATOM	2034	O	TYR	318	48.933	23.108	25.525	1.00	19.56
	ATOM	2035	N	ASP	319	48.624	21.634	27.194	1.00	21.68
	ATOM	2036	CA	ASP	319	49.041	20.468	26.415	1.00	24.93
	ATOM	2037	CB	ASP	319	48.942	19.205	27.273	1.00	27.75
60	ATOM	2038	CG	ASP	319	47.532	18.947	27.770	1.00	33.89
	ATOM	2039	OD1	ASP	319	46.943	19.866	28.377	1.00	37.33

	ATOM	2040	OD2	ASP	319	47.009	17.829	25.360	1.00	36.71
	ATOM	2041	C	ASP	319	48.214	20.275	25.144	1.00	24.42
	ATOM	2042	O	ASP	319	48.721	19.790	24.133	1.00	24.30
	ATOM	2043	N	LEU	320	46.940	20.648	25.200	1.00	22.05
5	ATOM	2044	CA	LEU	320	46.057	20.502	24.048	1.00	21.65
	ATOM	2045	CB	LEU	320	44.594	20.431	24.503	1.00	21.37
	ATOM	2046	CG	LEU	320	44.138	19.298	25.429	1.00	20.50
	ATOM	2047	CD1	LEU	320	42.647	19.458	25.712	1.00	20.57
	ATOM	2048	CD2	LEU	320	44.414	17.946	24.780	1.00	20.05
10	ATOM	2049	C	LEU	320	46.190	21.626	23.023	1.00	20.30
	ATOM	2050	O	LEU	320	45.750	21.476	21.884	1.00	20.89
	ATOM	2051	N	VAL	321	46.803	22.743	23.411	1.00	18.20
	ATOM	2052	CA	VAL	321	46.911	23.878	22.497	1.00	17.14
	ATOM	2053	CB	VAL	321	46.014	25.051	22.986	1.00	15.95
15	ATOM	2054	CG1	VAL	321	44.637	24.529	23.358	1.00	16.89
	ATOM	2055	CG2	VAL	321	46.648	25.737	24.182	1.00	13.25
	ATOM	2056	C	VAL	321	48.319	24.420	22.267	1.00	18.07
	ATOM	2057	O	VAL	321	48.477	25.496	21.697	1.00	19.68
	ATOM	2058	N	VAL	322	49.342	23.689	22.699	1.00	20.47
20	ATOM	2059	CA	VAL	322	50.715	24.154	22.516	1.00	23.25
	ATOM	2060	CB	VAL	322	51.735	23.050	22.893	1.00	25.43
	ATOM	2061	CG1	VAL	322	51.487	21.801	22.069	1.00	27.69
	ATOM	2062	CG2	VAL	322	53.156	23.561	22.680	1.00	27.11
	ATOM	2063	C	VAL	322	50.975	24.620	21.077	1.00	22.80
25	ATOM	2064	O	VAL	322	50.758	23.875	20.123	1.00	23.34
	ATOM	2065	N	PRO	323	51.432	25.874	20.904	1.00	23.14
	ATOM	2066	CD	PRO	323	51.589	26.917	21.934	1.00	21.86
	ATOM	2067	CA	PRO	323	51.712	26.414	19.566	1.00	24.47
	ATOM	2068	CB	PRO	323	52.152	27.848	19.855	1.00	23.04
30	ATOM	2069	CG	PRO	323	51.422	28.181	21.134	1.00	22.71
	ATOM	2070	C	PRO	323	52.790	25.620	18.821	1.00	26.42
	ATOM	2071	O	PRO	323	52.615	25.255	17.658	1.00	26.23
	ATOM	2072	N	PHE	324	53.905	25.359	19.494	1.00	27.57
	ATOM	2073	CA	PHE	324	54.996	24.606	18.885	1.00	28.92
35	ATOM	2074	CB	PHE	324	56.232	25.494	18.707	1.00	29.24
	ATOM	2075	CG	PHE	324	56.003	26.667	17.801	1.00	28.40
	ATOM	2076	CD1	PHE	324	55.591	27.890	18.314	1.00	28.05
	ATOM	2077	CD2	PHE	324	56.159	26.538	16.426	1.00	30.34
	ATOM	2078	CE1	PHE	324	55.333	28.964	17.473	1.00	28.58
40	ATOM	2079	CE2	PHE	324	55.903	27.605	15.575	1.00	28.99
	ATOM	2080	CZ	PHE	324	55.490	28.823	16.099	1.00	29.77
	ATOM	2081	C	PHE	324	55.339	23.400	19.738	1.00	29.62
	ATOM	2082	O	PHE	324	56.221	23.460	20.596	1.00	27.80
	ATOM	2083	N	PRO	325	54.633	22.280	19.514	1.00	31.43
45	ATOM	2084	CD	PRO	325	53.589	22.095	18.491	1.00	32.36
	ATOM	2085	CA	PRO	325	54.855	21.042	20.263	1.00	34.46
	ATOM	2086	CB	PRO	325	53.756	20.118	19.737	1.00	33.87
	ATOM	2087	CG	PRO	325	53.560	20.595	18.336	1.00	33.40
	ATOM	2088	C	PRO	325	56.257	20.463	20.083	1.00	36.18
50	ATOM	2089	O	PRO	325	56.677	19.593	20.849	1.00	37.18
	ATOM	2090	N	SER	326	56.980	20.947	19.077	1.00	37.49
	ATOM	2091	CA	SER	326	58.337	20.473	18.832	1.00	41.11
	ATOM	2092	CB	SER	326	58.858	20.989	17.490	1.00	42.68
	ATOM	2093	OG	SER	326	58.218	20.326	16.416	1.00	46.06
55	ATOM	2094	C	SER	326	59.259	20.936	19.949	1.00	41.74
	ATOM	2095	O	SER	326	60.210	20.246	20.300	1.00	42.06
	ATOM	2096	N	ALA	327	58.974	22.113	20.498	1.00	42.81
	ATOM	2097	CA	ALA	327	59.767	22.663	21.591	1.00	44.30
	ATOM	2098	CB	ALA	327	59.778	24.183	21.516	1.00	44.00
60	ATOM	2099	C	ALA	327	59.138	22.200	22.903	1.00	45.75
	ATOM	2100	O	ALA	327	58.246	22.857	23.440	1.00	45.98

	ATOM	2101	PRO	328	59.601	21.059	23.4	1.00	46.83
	ATOM	2102	CD PRO	328	60.768	20.265	23.013	1.00	47.01
	ATOM	2103	CA PRO	328	59.051	20.539	24.692	1.00	48.00
	ATOM	2104	CB PRO	328	59.746	19.189	24.834	1.00	48.21
5	ATOM	2105	CG PRO	328	61.100	19.469	24.262	1.00	48.04
	ATOM	2106	C PRO	328	59.297	21.448	25.890	1.00	48.18
	ATOM	2107	O PRO	328	60.282	22.187	25.940	1.00	46.83
	ATOM	2108	N ALA	329	58.381	21.388	26.849	1.00	49.04
	ATOM	2109	CA ALA	329	58.484	22.185	28.063	1.00	50.15
10	ATOM	2110	CB ALA	329	57.284	23.123	28.183	1.00	50.22
	ATOM	2111	C ALA	329	58.521	21.222	29.240	1.00	49.64
	ATOM	2112	O ALA	329	57.741	20.270	29.293	1.00	49.91
	ATOM	2113	N MET	330	59.432	21.462	30.177	1.00	49.53
	ATOM	2114	CA MET	330	59.547	20.599	31.340	1.00	49.53
15	ATOM	2115	CB MET	330	60.673	21.070	32.257	1.00	51.15
	ATOM	2116	CG MET	330	62.029	20.527	31.884	1.00	53.03
	ATOM	2117	SD MET	330	63.171	20.647	33.253	1.00	57.37
	ATOM	2118	CE MET	330	62.679	19.231	34.226	1.00	55.84
	ATOM	2119	C MET	330	58.262	20.525	32.144	1.00	48.79
20	ATOM	2120	O MET	330	57.481	21.475	32.183	1.00	49.29
	ATOM	2121	N ASP	331	58.048	19.381	32.781	1.00	47.29
	ATOM	2122	CA ASP	331	56.874	19.182	33.615	1.00	45.73
	ATOM	2123	CB ASP	331	56.656	17.689	33.862	1.00	47.61
	ATOM	2124	CG ASP	331	55.342	17.400	34.557	1.00	48.84
25	ATOM	2125	OD1 ASP	331	54.962	18.178	35.459	1.00	49.28
	ATOM	2126	OD2 ASP	331	54.698	16.388	34.211	1.00	49.53
	ATOM	2127	C ASP	331	57.190	19.889	34.932	1.00	43.86
	ATOM	2128	O ASP	331	57.723	19.279	35.860	1.00	42.31
	ATOM	2129	N THR	332	56.872	21.178	34.999	1.00	41.74
30	ATOM	2130	CA THR	332	57.140	21.978	36.191	1.00	40.58
	ATOM	2131	CB THR	332	56.484	23.371	36.090	1.00	41.27
	ATOM	2132	OG1 THR	332	56.908	24.016	34.881	1.00	42.14
	ATOM	2133	CG2 THR	332	56.896	24.236	37.275	1.00	42.66
	ATOM	2134	C THR	332	56.669	21.307	37.476	1.00	39.17
35	ATOM	2135	O THR	332	57.411	21.245	38.457	1.00	37.70
	ATOM	2136	N THR	333	55.437	20.807	37.472	1.00	37.74
	ATOM	2137	CA THR	333	54.890	20.144	38.648	1.00	36.86
	ATOM	2138	CB THR	333	53.427	19.719	38.418	1.00	37.40
	ATOM	2139	OG1 THR	333	52.628	20.882	38.169	1.00	36.62
40	ATOM	2140	CG2 THR	333	52.886	18.984	39.635	1.00	37.24
	ATOM	2141	C THR	333	55.722	18.914	38.981	1.00	36.88
	ATOM	2142	O THR	333	56.088	18.692	40.137	1.00	36.19
	ATOM	2143	N ALA	334	56.023	18.116	37.960	1.00	36.39
	ATOM	2144	CA ALA	334	56.826	16.917	38.153	1.00	35.82
45	ATOM	2145	CB ALA	334	57.017	16.187	36.828	1.00	36.09
	ATOM	2146	C ALA	334	58.176	17.327	38.725	1.00	35.55
	ATOM	2147	O ALA	334	58.707	16.666	39.618	1.00	36.24
	ATOM	2148	N ALA	335	58.723	18.424	38.209	1.00	34.21
	ATOM	2149	CA ALA	335	60.009	18.923	38.675	1.00	33.61
50	ATOM	2150	CB ALA	335	60.436	20.128	37.846	1.00	33.15
	ATOM	2151	C ALA	335	59.901	19.304	40.146	1.00	33.27
	ATOM	2152	O ALA	335	60.704	18.866	40.965	1.00	31.41
	ATOM	2153	N MET	336	58.894	20.107	40.482	1.00	34.57
	ATOM	2154	CA MET	336	58.688	20.531	41.866	1.00	34.78
55	ATOM	2155	CB MET	336	57.427	21.394	41.975	1.00	32.50
	ATOM	2156	CG MET	336	57.541	22.735	41.264	1.00	29.70
	ATOM	2157	SD MET	336	56.074	23.759	41.452	1.00	28.38
	ATOM	2158	CE MET	336	56.194	24.182	43.188	1.00	22.94
	ATOM	2159	C MET	336	58.578	19.323	42.795	1.00	35.93
60	ATOM	2160	O MET	336	59.274	19.241	43.810	1.00	35.89
	ATOM	2161	N LEU	337	57.706	18.384	42.440	1.00	37.76

	ATOM	2162	CA	LEU	337	57.524	17.178	42.339	1.00	40.14
	ATOM	2163	CB	LEU	337	56.380	16.334	42.666	1.00	40.76
	ATOM	2164	CG	LEU	337	54.971	16.932	42.725	1.00	41.59
	ATOM	2165	CD1	LEU	337	54.024	16.102	41.871	1.00	41.83
5	ATOM	2166	CD2	LEU	337	54.491	16.982	44.171	1.00	41.58
	ATOM	2167	C	LEU	337	58.817	16.365	43.241	1.00	41.26
	ATOM	2168	O	LEU	337	59.253	15.871	44.283	1.00	41.87
	ATOM	2169	N	ALA	338	59.430	16.242	42.067	1.00	41.93
	ATOM	2170	CA	ALA	338	60.671	15.490	41.913	1.00	42.20
10	ATOM	2171	CB	ALA	338	61.200	15.641	40.495	1.00	43.26
	ATOM	2172	C	ALA	338	61.736	15.922	42.909	1.00	42.52
	ATOM	2173	O	ALA	338	62.386	15.081	43.530	1.00	42.44
	ATOM	2174	N	GLN	339	61.926	17.230	43.062	1.00	42.25
	ATOM	2175	CA	GLN	339	62.928	17.713	44.001	1.00	41.65
15	ATOM	2176	CB	GLN	339	63.734	18.859	43.394	1.00	42.74
	ATOM	2177	CG	GLN	339	63.026	19.643	42.327	1.00	44.14
	ATOM	2178	CD	GLN	339	63.993	20.157	41.285	1.00	45.56
	ATOM	2179	OE1	GLN	339	64.984	20.807	41.613	1.00	47.00
	ATOM	2180	NE2	GLN	339	63.715	19.862	40.019	1.00	45.62
20	ATOM	2181	C	GLN	339	62.357	18.113	45.350	1.00	40.44
	ATOM	2182	O	GLN	339	62.847	19.031	46.004	1.00	41.27
	ATOM	2183	N	GLY	340	61.312	17.399	45.752	1.00	39.31
	ATOM	2184	CA	GLY	340	60.678	17.619	47.038	1.00	38.16
	ATOM	2185	C	GLY	340	60.257	19.015	47.451	1.00	35.80
25	ATOM	2186	O	GLY	340	60.453	19.396	48.603	1.00	35.38
	ATOM	2187	N	TRP	341	59.690	19.788	46.533	1.00	34.88
	ATOM	2188	CA	TRP	341	59.229	21.119	46.900	1.00	33.70
	ATOM	2189	CB	TRP	341	58.805	21.916	45.663	1.00	32.35
	ATOM	2190	CG	TRP	341	59.926	22.667	45.025	1.00	32.45
30	ATOM	2191	CD2	TRP	341	59.992	24.080	44.792	1.00	33.12
	ATOM	2192	CE2	TRP	341	61.228	24.341	44.163	1.00	33.53
	ATOM	2193	CE3	TRP	341	59.125	25.151	45.053	1.00	33.17
	ATOM	2194	CD1	TRP	341	61.089	22.146	44.544	1.00	33.26
	ATOM	2195	NE1	TRP	341	61.877	23.143	44.024	1.00	33.74
35	ATOM	2196	CZ2	TRP	341	61.624	25.632	43.788	1.00	33.86
	ATOM	2197	CZ3	TRP	341	59.517	26.435	44.681	1.00	33.83
	ATOM	2198	CH2	TRP	341	60.758	26.663	44.054	1.00	33.79
	ATOM	2199	C	TRP	341	58.035	20.916	47.822	1.00	32.71
	ATOM	2200	O	TRP	341	57.268	19.968	47.650	1.00	32.15
40	ATOM	2201	N	THR	342	57.892	21.790	48.812	1.00	31.61
	ATOM	2202	CA	THR	342	56.782	21.697	49.754	1.00	30.86
	ATOM	2203	CB	THR	342	57.271	21.368	51.176	1.00	31.36
	ATOM	2204	OG1	THR	342	58.015	22.481	51.687	1.00	30.07
	ATOM	2205	CG2	THR	342	58.158	20.128	51.170	1.00	32.63
45	ATOM	2206	C	THR	342	56.072	23.042	49.825	1.00	29.61
	ATOM	2207	O	THR	342	56.577	24.044	49.324	1.00	28.37
	ATOM	2208	N	PRO	343	54.882	23.078	50.442	1.00	29.45
	ATOM	2209	CD	PRO	343	54.024	21.946	50.843	1.00	27.29
	ATOM	2210	CA	PRO	343	54.160	24.347	50.552	1.00	28.24
50	ATOM	2211	CB	PRO	343	52.937	23.969	51.378	1.00	27.42
	ATOM	2212	CG	PRO	343	52.646	22.579	50.887	1.00	27.57
	ATOM	2213	C	PRO	343	55.036	25.393	51.247	1.00	28.41
	ATOM	2214	O	PRO	343	55.105	26.543	50.816	1.00	28.24
	ATOM	2215	N	ARG	344	55.721	24.982	52.311	1.00	29.01
55	ATOM	2216	CA	ARG	344	56.588	25.896	53.052	1.00	30.23
	ATOM	2217	CB	ARG	344	57.207	25.183	54.260	1.00	32.72
	ATOM	2218	CG	ARG	344	57.690	26.117	55.376	1.00	38.15
	ATOM	2219	CD	ARG	344	58.192	25.317	56.580	1.00	41.91
	ATOM	2220	NE	ARG	344	58.217	26.096	57.821	1.00	46.21
60	ATOM	2221	CZ	ARG	344	59.095	27.056	58.100	1.00	46.40
	ATOM	2222	NH1	ARG	344	59.026	27.700	59.258	1.00	46.37

	ATOM	2223	ARG	344	60.046	27.368	57.232	1.00	48.36	
	ATOM	2224	C	ARG	344	57.689	26.436	52.140	1.00	29.35
	ATOM	2225	O	ARG	344	58.016	27.620	52.183	1.00	28.16
	ATOM	2226	N	ARG	345	58.248	25.565	51.304	1.00	28.94
5	ATOM	2227	CA	ARG	345	59.302	25.968	50.378	1.00	28.91
	ATOM	2228	CB	ARG	345	59.793	24.764	49.567	1.00	32.39
	ATOM	2229	CG	ARG	345	61.304	24.601	49.543	1.00	38.26
	ATOM	2230	CD	ARG	345	62.016	25.852	49.048	1.00	41.91
	ATOM	2231	NE	ARG	345	62.441	25.769	47.650	1.00	47.14
10	ATOM	2232	CZ	ARG	345	63.250	24.830	47.163	1.00	48.30
	ATOM	2233	NH1	ARG	345	63.724	23.877	47.955	1.00	50.47
	ATOM	2234	NH2	ARG	345	63.609	24.858	45.888	1.00	48.82
	ATOM	2235	C	ARG	345	58.771	27.020	49.414	1.00	26.66
	ATOM	2236	O	ARG	345	59.443	28.008	49.117	1.00	25.29
15	ATOM	2237	N	MET	346	57.558	26.783	48.925	1.00	24.67
	ATOM	2238	CA	MET	346	56.909	27.680	47.981	1.00	23.82
	ATOM	2239	CB	MET	346	55.538	27.115	47.593	1.00	22.88
	ATOM	2240	CG	MET	346	55.631	25.817	46.789	1.00	22.60
	ATOM	2241	SD	MET	346	54.099	24.884	46.702	1.00	23.12
20	ATOM	2242	CE	MET	346	53.193	25.800	45.456	1.00	22.77
	ATOM	2243	C	MET	346	56.776	29.087	48.548	1.00	22.51
	ATOM	2244	O	MET	346	57.111	30.061	47.877	1.00	22.36
	ATOM	2245	N	PHE	347	56.299	29.198	49.783	1.00	22.71
	ATOM	2246	CA	PHE	347	56.154	30.512	50.397	1.00	23.33
25	ATOM	2247	CB	PHE	347	55.272	30.431	51.650	1.00	21.23
	ATOM	2248	CG	PHE	347	53.810	30.232	51.344	1.00	20.37
	ATOM	2249	CD1	PHE	347	53.280	28.957	51.191	1.00	20.90
	ATOM	2250	CD2	PHE	347	52.974	31.328	51.156	1.00	20.68
	ATOM	2251	CE1	PHE	347	51.937	28.775	50.855	1.00	22.83
30	ATOM	2252	CE2	PHE	347	51.633	31.158	50.820	1.00	19.46
	ATOM	2253	CZ	PHE	347	51.113	29.879	50.668	1.00	20.69
	ATOM	2254	C	PHE	347	57.521	31.109	50.731	1.00	24.58
	ATOM	2255	O	PHE	347	57.698	32.329	50.701	1.00	23.58
	ATOM	2256	N	LYS	348	58.489	30.248	51.039	1.00	25.53
35	ATOM	2257	CA	LYS	348	59.838	30.708	51.349	1.00	25.95
	ATOM	2258	CB	LYS	348	60.726	29.531	51.772	1.00	29.39
	ATOM	2259	CG	LYS	348	60.529	29.067	53.209	1.00	32.76
	ATOM	2260	CD	LYS	348	61.020	30.117	54.201	1.00	37.96
	ATOM	2261	CE	LYS	348	60.995	29.590	55.633	1.00	38.41
40	ATOM	2262	NZ	LYS	348	61.587	30.556	56.606	1.00	38.93
	ATOM	2263	C	LYS	348	60.428	31.383	50.115	1.00	25.86
	ATOM	2264	O	LYS	348	61.081	32.418	50.223	1.00	26.39
	ATOM	2265	N	GLU	349	60.197	30.796	48.941	1.00	25.73
	ATOM	2266	CA	GLU	349	60.701	31.375	47.696	1.00	25.00
45	ATOM	2267	CB	GLU	349	60.425	30.445	46.510	1.00	27.57
	ATOM	2268	CG	GLU	349	61.252	29.163	46.476	1.00	32.10
	ATOM	2269	CD	GLU	349	62.754	29.418	46.536	1.00	34.82
	ATOM	2270	OE1	GLU	349	63.207	30.487	46.066	1.00	35.04
	ATOM	2271	OE2	GLU	349	63.484	28.538	47.041	1.00	36.16
50	ATOM	2272	C	GLU	349	60.031	32.727	47.446	1.00	24.44
	ATOM	2273	O	GLU	349	60.679	33.684	47.018	1.00	23.97
	ATOM	2274	N	ALA	350	58.727	32.797	47.702	1.00	23.38
	ATOM	2275	CA	ALA	350	57.985	34.043	47.522	1.00	22.42
	ATOM	2276	CB	ALA	350	56.511	33.829	47.857	1.00	22.54
55	ATOM	2277	C	ALA	350	58.579	35.104	48.444	1.00	21.24
	ATOM	2278	O	ALA	350	58.844	36.233	48.027	1.00	21.74
	ATOM	2279	N	ASP	351	58.787	34.732	49.702	1.00	20.72
	ATOM	2280	CA	ASP	351	59.353	35.652	50.682	1.00	21.66
	ATOM	2281	CB	ASP	351	59.499	34.949	52.037	1.00	23.19
60	ATOM	2282	CG	ASP	351	59.901	35.900	53.150	1.00	26.89
	ATOM	2283	OD1	ASP	351	59.198	36.914	53.364	1.00	26.58

	ATOM	2285	OD2	ASP	351	60.921	35.633	50.118	1.00	26.96
	ATOM	2285	C	ASP	351	60.708	36.163	50.198	1.00	22.19
	ATOM	2286	O	ASP	351	61.051	37.330	50.392	1.00	22.86
	ATOM	2287	N	ASP	352	61.472	35.289	49.548	1.00	23.64
5	ATOM	2288	CA	ASP	352	62.787	35.667	49.041	1.00	23.82
	ATOM	2289	CB	ASP	352	63.553	34.430	48.548	1.00	23.91
	ATOM	2290	CG	ASP	352	64.921	34.780	47.988	1.00	26.32
	ATOM	2291	OD1	ASP	352	65.096	34.724	46.753	1.00	25.02
	ATOM	2292	OD2	ASP	352	65.821	35.124	48.786	1.00	28.34
10	ATOM	2293	C	ASP	352	62.680	36.688	47.916	1.00	23.50
	ATOM	2294	O	ASP	352	63.486	37.612	47.836	1.00	22.72
	ATOM	2295	N	PHE	353	61.681	36.534	47.051	1.00	23.52
	ATOM	2296	CA	PHE	353	61.522	37.475	45.953	1.00	22.24
	ATOM	2297	CB	PHE	353	60.397	37.045	45.001	1.00	21.06
15	ATOM	2298	CG	PHE	353	60.542	37.609	43.607	1.00	19.58
	ATOM	2299	CD1	PHE	353	60.744	36.767	42.516	1.00	21.35
	ATOM	2300	CD2	PHE	353	60.528	38.984	43.392	1.00	19.63
	ATOM	2301	CE1	PHE	353	60.935	37.288	41.230	1.00	19.63
	ATOM	2302	CE2	PHE	353	60.718	39.513	42.115	1.00	19.63
20	ATOM	2303	CZ	PHE	353	60.923	38.660	41.029	1.00	19.46
	ATOM	2304	C	PHE	353	61.237	38.870	46.504	1.00	20.90
	ATOM	2305	O	PHE	353	61.837	39.849	46.059	1.00	22.16
	ATOM	2306	N	PHE	354	60.329	38.968	47.471	1.00	20.76
	ATOM	2307	CA	PHE	354	60.019	40.269	48.057	1.00	20.13
25	ATOM	2308	CB	PHE	354	58.915	40.143	49.115	1.00	20.30
	ATOM	2309	CG	PHE	354	57.526	40.045	48.535	1.00	18.25
	ATOM	2310	CD1	PHE	354	56.932	38.805	48.306	1.00	17.88
	ATOM	2311	CD2	PHE	354	56.826	41.200	48.187	1.00	19.40
	ATOM	2312	CE1	PHE	354	55.662	38.713	47.738	1.00	17.04
30	ATOM	2313	CE2	PHE	354	55.548	41.123	47.612	1.00	18.88
	ATOM	2314	CZ	PHE	354	54.968	39.875	47.388	1.00	19.24
	ATOM	2315	C	PHE	354	61.258	40.935	48.671	1.00	21.10
	ATOM	2316	O	PHE	354	61.517	42.120	48.427	1.00	19.45
	ATOM	2317	N	THR	355	62.028	40.184	49.456	1.00	22.06
35	ATOM	2318	CA	THR	355	63.224	40.748	50.081	1.00	24.14
	ATOM	2319	CB	THR	355	63.849	39.787	51.126	1.00	24.56
	ATOM	2320	OG1	THR	355	64.083	38.505	50.533	1.00	26.60
	ATOM	2321	CG2	THR	355	62.926	39.633	52.326	1.00	25.22
	ATOM	2322	C	THR	355	64.289	41.118	49.055	1.00	23.51
40	ATOM	2323	O	THR	355	65.042	42.070	49.257	1.00	25.42
	ATOM	2324	N	SER	356	64.342	40.386	47.948	1.00	23.09
	ATOM	2325	CA	SER	356	65.332	40.676	46.913	1.00	22.30
	ATOM	2326	CB	SER	356	65.256	39.642	45.784	1.00	23.31
	ATOM	2327	OG	SER	356	64.163	39.901	44.915	1.00	25.00
45	ATOM	2328	C	SER	356	65.088	42.068	46.345	1.00	22.33
	ATOM	2329	O	SER	356	66.005	42.707	45.824	1.00	22.15
	ATOM	2330	N	LEU	357	63.846	42.535	46.452	1.00	20.54
	ATOM	2331	CA	LEU	357	63.477	43.855	45.951	1.00	21.18
	ATOM	2332	CB	LEU	357	62.007	43.874	45.515	1.00	20.21
50	ATOM	2333	CG	LEU	357	61.567	42.939	44.386	1.00	22.18
	ATOM	2334	CD1	LEU	357	60.089	43.169	44.092	1.00	20.93
	ATOM	2335	CD2	LEU	357	62.391	43.197	43.140	1.00	19.15
	ATOM	2336	C	LEU	357	63.687	44.929	47.015	1.00	21.10
	ATOM	2337	O	LEU	357	63.448	46.113	46.769	1.00	21.69
55	ATOM	2338	N	GLY	358	64.133	44.513	48.193	1.00	20.78
	ATOM	2339	CA	GLY	358	64.340	45.465	49.269	1.00	22.52
	ATOM	2340	C	GLY	358	63.086	45.581	50.120	1.00	23.30
	ATOM	2341	O	GLY	358	63.053	46.339	51.091	1.00	23.76
	ATOM	2342	N	LEU	359	62.051	44.826	49.754	1.00	20.72
60	ATOM	2343	CA	LEU	359	60.792	44.844	50.487	1.00	21.07
	ATOM	2344	CB	LEU	359	59.667	44.293	49.604	1.00	17.66

	ATOM	2345	LEU	359	59.417	45.174	48.1	1.00	19.03
	ATOM	2346	CD1 LEU	359	58.362	44.551	47.459	1.00	16.52
	ATOM	2347	CD2 LEU	359	58.977	46.563	48.829	1.00	16.74
	ATOM	2348	C LEU	359	60.909	44.062	51.797	1.00	21.60
5	ATOM	2349	O LEU	359	61.932	43.424	52.058	1.00	21.13
	ATOM	2350	N LEU	360	59.863	44.112	52.616	1.00	21.11
	ATOM	2351	CA LEU	360	59.869	43.451	53.921	1.00	22.96
	ATOM	2352	CB LEU	360	58.815	44.093	54.830	1.00	23.88
	ATOM	2353	CG LEU	360	58.982	45.575	55.174	1.00	27.26
10	ATOM	2354	CD1 LEU	360	57.692	46.100	55.788	1.00	27.98
	ATOM	2355	CD2 LEU	360	60.162	45.756	56.131	1.00	25.65
	ATOM	2356	C LEU	360	59.654	41.942	53.937	1.00	23.76
	ATOM	2357	O LEU	360	58.870	41.401	53.163	1.00	24.22
	ATOM	2358	N PRO	361	60.355	41.241	54.840	1.00	25.33
15	ATOM	2359	CD PRO	361	61.465	41.730	55.683	1.00	26.75
	ATOM	2360	CA PRO	361	60.217	39.791	54.953	1.00	25.45
	ATOM	2361	CB PRO	361	61.562	39.373	55.529	1.00	27.39
	ATOM	2362	CG PRO	361	61.851	40.492	56.480	1.00	27.59
	ATOM	2363	C PRO	361	59.071	39.538	55.926	1.00	25.74
20	ATOM	2364	O PRO	361	58.773	40.394	56.759	1.00	26.40
	ATOM	2365	N VAL	362	58.412	38.390	55.827	1.00	25.30
	ATOM	2366	CA VAL	362	57.323	38.115	56.757	1.00	25.65
	ATOM	2367	CB VAL	362	56.462	36.916	56.303	1.00	24.53
	ATOM	2368	CG1 VAL	362	55.770	37.249	54.980	1.00	23.68
25	ATOM	2369	CG2 VAL	362	57.327	35.674	56.167	1.00	23.66
	ATOM	2370	C VAL	362	57.926	37.820	58.127	1.00	27.19
	ATOM	2371	O VAL	362	59.013	37.247	58.221	1.00	27.05
	ATOM	2372	N PRO	363	57.235	38.226	59.207	1.00	26.80
	ATOM	2373	CD PRO	363	56.022	39.063	59.229	1.00	26.99
30	ATOM	2374	CA PRO	363	57.726	37.995	60.570	1.00	27.57
	ATOM	2375	CB PRO	363	56.685	38.706	61.441	1.00	26.11
	ATOM	2376	CG PRO	363	56.169	39.793	60.545	1.00	27.52
	ATOM	2377	C PRO	363	57.826	36.513	60.911	1.00	27.67
	ATOM	2378	O PRO	363	57.114	35.684	60.340	1.00	27.28
35	ATOM	2379	N PRO	364	58.722	36.160	61.847	1.00	28.91
	ATOM	2380	CD PRO	364	59.688	37.033	62.542	1.00	30.07
	ATOM	2381	CA PRO	364	58.888	34.761	62.252	1.00	27.66
	ATOM	2382	CB PRO	364	59.844	34.864	63.437	1.00	30.48
	ATOM	2383	CG PRO	364	60.707	36.037	63.061	1.00	31.62
40	ATOM	2384	C PRO	364	57.537	34.165	62.650	1.00	27.12
	ATOM	2385	O PRO	364	57.245	33.003	62.369	1.00	25.49
	ATOM	2386	N GLU	365	56.715	34.985	63.297	1.00	28.48
	ATOM	2387	CA GLU	365	55.387	34.578	63.755	1.00	29.40
	ATOM	2388	CB GLU	365	54.705	35.769	64.439	1.00	31.16
45	ATOM	2389	CG GLU	365	53.287	35.524	64.907	1.00	34.46
	ATOM	2390	CD GLU	365	52.757	36.659	65.770	1.00	37.66
	ATOM	2391	OE1 GLU	365	53.118	37.831	65.518	1.00	38.25
	ATOM	2392	OE2 GLU	365	51.967	36.381	66.696	1.00	38.79
	ATOM	2393	C GLU	365	54.511	34.039	62.617	1.00	29.17
50	ATOM	2394	O GLU	365	53.653	33.178	62.832	1.00	29.47
	ATOM	2395	N PHE	366	54.736	34.549	61.409	1.00	28.47
	ATOM	2396	CA PHE	366	53.990	34.128	60.222	1.00	26.31
	ATOM	2397	CB PHE	366	54.487	34.904	58.997	1.00	25.09
	ATOM	2398	CG PHE	366	53.986	34.361	57.680	1.00	23.73
55	ATOM	2399	CD1 PHE	366	52.829	34.865	57.096	1.00	22.77
	ATOM	2400	CD2 PHE	366	54.681	33.348	57.023	1.00	24.15
	ATOM	2401	CE1 PHE	366	52.368	34.371	55.873	1.00	21.92
	ATOM	2402	CE2 PHE	366	54.228	32.845	55.799	1.00	22.88
	ATOM	2403	CZ PHE	366	53.071	33.358	55.225	1.00	22.34
60	ATOM	2404	C PHE	366	54.162	32.632	59.965	1.00	25.92
	ATOM	2405	O PHE	366	53.190	31.899	59.774	1.00	24.62

	ATOM	2407	N	TRP	367	55.414	32.189	59.948	1.00	26.49
	ATOM	2407	CA	TRP	367	55.724	30.788	59.699	1.00	28.05
	ATOM	2408	CB	TRP	367	57.242	30.605	59.640	1.00	27.25
	ATOM	2409	CG	TRP	367	57.869	31.421	58.559	1.00	26.72
5	ATOM	2410	CD2	TRP	367	57.708	31.235	57.148	1.00	24.28
	ATOM	2411	CE2	TRP	367	58.450	32.249	56.508	1.00	24.53
	ATOM	2412	CE3	TRP	367	57.007	30.308	56.363	1.00	25.77
	ATOM	2413	CD1	TRP	367	58.678	32.507	58.713	1.00	26.27
	ATOM	2414	NE1	TRP	367	59.032	33.011	57.486	1.00	24.78
10	ATOM	2415	CZ2	TRP	367	58.515	32.367	55.115	1.00	25.59
	ATOM	2416	CZ3	TRP	367	57.070	30.423	54.975	1.00	25.39
	ATOM	2417	CH2	TRP	367	57.820	31.446	54.368	1.00	26.81
	ATOM	2418	C	TRP	367	55.128	29.845	60.737	1.00	28.77
	ATOM	2419	O	TRP	367	54.818	28.693	60.436	1.00	29.68
15	ATOM	2420	N	ASN	368	54.948	30.341	61.955	1.00	29.29
	ATOM	2421	CA	ASN	368	54.407	29.517	63.023	1.00	30.04
	ATOM	2422	CB	ASN	368	54.955	29.999	64.369	1.00	33.90
	ATOM	2423	CG	ASN	368	54.405	29.197	65.545	1.00	37.17
	ATOM	2424	OD1	ASN	368	53.214	29.307	65.846	1.00	41.44
20	ATOM	2425	ND2	ASN	368	55.233	28.397	66.223	1.00	37.16
	ATOM	2426	C	ASN	368	52.882	29.448	63.097	1.00	30.01
	ATOM	2427	O	ASN	368	52.323	28.404	63.431	1.00	27.10
	ATOM	2428	N	LYS	369	52.206	30.547	62.780	1.00	28.47
	ATOM	2429	CA	LYS	369	50.753	30.567	62.870	1.00	29.06
25	ATOM	2430	CB	LYS	369	50.308	31.882	63.513	1.00	30.23
	ATOM	2431	CG	LYS	369	50.848	32.067	64.931	1.00	32.99
	ATOM	2432	CD	LYS	369	50.314	33.335	65.573	1.00	38.01
	ATOM	2433	CE	LYS	369	50.831	33.502	66.996	1.00	40.47
	ATOM	2434	NZ	LYS	369	50.244	34.711	67.648	1.00	43.23
30	ATOM	2435	C	LYS	369	49.964	30.320	61.584	1.00	28.08
	ATOM	2436	O	LYS	369	48.788	29.961	61.645	1.00	29.11
	ATOM	2437	N	SER	370	50.594	30.498	60.426	1.00	27.36
	ATOM	2438	CA	SER	370	49.904	30.288	59.151	1.00	26.35
	ATOM	2439	CB	SER	370	50.774	30.764	57.977	1.00	24.78
35	ATOM	2440	OG	SER	370	50.954	32.171	57.991	1.00	22.65
	ATOM	2441	C	SER	370	49.524	28.830	58.908	1.00	27.44
	ATOM	2442	O	SER	370	50.158	27.911	59.430	1.00	27.46
	ATOM	2443	N	MET	371	48.475	28.628	58.117	1.00	27.03
	ATOM	2444	CA	MET	371	48.029	27.288	57.749	1.00	27.37
40	ATOM	2445	CB	MET	371	46.524	27.117	57.973	1.00	25.87
	ATOM	2446	CG	MET	371	46.028	25.700	57.695	1.00	23.55
	ATOM	2447	SD	MET	371	44.257	25.591	57.365	1.00	24.62
	ATOM	2448	CE	MET	371	44.241	25.865	55.602	1.00	23.28
	ATOM	2449	C	MET	371	48.336	27.186	56.259	1.00	28.01
45	ATOM	2450	O	MET	371	47.493	27.511	55.419	1.00	27.83
	ATOM	2451	N	LEU	372	49.547	26.742	55.935	1.00	28.67
	ATOM	2452	CA	LEU	372	49.976	26.636	54.544	1.00	27.98
	ATOM	2453	CB	LEU	372	51.488	26.849	54.463	1.00	26.09
	ATOM	2454	CG	LEU	372	52.000	28.142	55.109	1.00	26.99
50	ATOM	2455	CD1	LEU	372	53.516	28.186	55.014	1.00	25.50
	ATOM	2456	CD2	LEU	372	51.382	29.362	54.421	1.00	25.38
	ATOM	2457	C	LEU	372	49.597	25.325	53.861	1.00	29.45
	ATOM	2458	O	LEU	372	49.835	25.154	52.664	1.00	29.43
	ATOM	2459	N	GLU	373	49.002	24.407	54.618	1.00	30.71
55	ATOM	2460	CA	GLU	373	48.589	23.115	54.074	1.00	33.88
	ATOM	2461	CB	GLU	373	49.576	22.012	54.460	1.00	36.25
	ATOM	2462	CG	GLU	373	51.022	22.277	54.127	1.00	43.43
	ATOM	2463	CD	GLU	373	51.929	21.197	54.686	1.00	46.04
	ATOM	2464	OE1	GLU	373	51.953	21.025	55.924	1.00	49.71
60	ATOM	2465	OE2	GLU	373	52.609	20.515	53.892	1.00	48.87
	ATOM	2466	C	GLU	373	47.230	22.718	54.622	1.00	33.50

	ATOM	2467	GLU	373	46.854	23.115	55.7	1.00	32.75
	ATOM	2468	N	LYS	374	46.506	21.917	53.851	1.00 33.65
	ATOM	2469	CA	LYS	374	45.200	21.429	54.271	1.00 35.26
	ATOM	2470	CB	LYS	374	44.523	20.687	53.121	1.00 35.25
5	ATOM	2471	CG	LYS	374	43.155	20.120	53.456	1.00 35.45
	ATOM	2472	CD	LYS	374	42.518	19.531	52.208	1.00 35.40
	ATOM	2473	CE	LYS	374	41.132	18.994	52.483	1.00 36.09
	ATOM	2474	NZ	LYS	374	40.514	18.496	51.224	1.00 36.76
	ATOM	2475	C	LYS	374	45.432	20.474	55.435	1.00 36.99
10	ATOM	2476	O	LYS	374	46.171	19.496	55.307	1.00 37.40
	ATOM	2477	N	PRO	375	44.813	20.747	56.591	1.00 38.18
	ATOM	2478	CD	PRO	375	44.031	21.941	56.951	1.00 38.24
	ATOM	2479	CA	PRO	375	44.992	19.873	57.753	1.00 40.05
	ATOM	2480	CB	PRO	375	44.133	20.545	58.822	1.00 39.71
15	ATOM	2481	CG	PRO	375	44.209	21.993	58.451	1.00 39.38
	ATOM	2482	C	PRO	375	44.570	18.427	57.509	1.00 41.45
	ATOM	2483	O	PRO	375	43.595	18.159	56.808	1.00 40.45
	ATOM	2484	N	THR	376	45.330	17.502	58.084	1.00 43.87
	ATOM	2485	CA	THR	376	45.042	16.077	57.989	1.00 46.82
20	ATOM	2486	CB	THR	376	46.331	15.268	57.766	1.00 47.11
	ATOM	2487	OG1	THR	376	47.272	15.569	58.804	1.00 48.76
	ATOM	2488	CG2	THR	376	46.946	15.622	56.425	1.00 46.74
	ATOM	2489	C	THR	376	44.450	15.750	59.355	1.00 48.06
	ATOM	2490	O	THR	376	44.102	14.612	59.664	1.00 49.50
25	ATOM	2491	N	ASP	377	44.345	16.808	60.151	1.00 49.79
	ATOM	2492	CA	ASP	377	43.821	16.801	61.510	1.00 50.68
	ATOM	2493	CB	ASP	377	43.722	18.252	61.991	1.00 51.52
	ATOM	2494	CG	ASP	377	44.084	18.416	63.445	1.00 53.90
	ATOM	2495	OD1	ASP	377	43.505	17.705	64.293	1.00 56.14
30	ATOM	2496	OD2	ASP	377	44.950	19.267	63.737	1.00 54.87
	ATOM	2497	C	ASP	377	42.439	16.162	61.607	1.00 50.48
	ATOM	2498	O	ASP	377	41.919	15.965	62.705	1.00 50.57
	ATOM	2499	N	GLY	378	41.845	15.831	60.465	1.00 50.81
	ATOM	2500	CA	GLY	378	40.504	15.280	60.486	1.00 50.66
35	ATOM	2501	C	GLY	378	39.635	16.487	60.795	1.00 50.28
	ATOM	2502	O	GLY	378	38.488	16.379	61.230	1.00 51.71
	ATOM	2503	N	ARG	379	40.231	17.653	60.560	1.00 48.17
	ATOM	2504	CA	ARG	379	39.613	18.954	60.788	1.00 45.10
	ATOM	2505	CB	ARG	379	40.688	19.934	61.261	1.00 45.50
40	ATOM	2506	CG	ARG	379	40.269	20.913	62.332	1.00 44.65
	ATOM	2507	CD	ARG	379	41.270	22.052	62.408	1.00 44.87
	ATOM	2508	NE	ARG	379	42.651	21.577	62.397	1.00 44.55
	ATOM	2509	CZ	ARG	379	43.705	22.356	62.170	1.00 44.28
	ATOM	2510	NH1	ARG	379	43.540	23.651	61.933	1.00 42.73
45	ATOM	2511	NH2	ARG	379	44.927	21.841	62.174	1.00 44.56
	ATOM	2512	C	ARG	379	39.013	19.464	59.477	1.00 41.98
	ATOM	2513	O	ARG	379	39.522	19.167	58.398	1.00 42.26
	ATOM	2514	N	GLU	380	37.932	20.227	59.573	1.00 38.86
	ATOM	2515	CA	GLU	380	37.286	20.788	58.390	1.00 35.74
50	ATOM	2516	CB	GLU	380	35.767	20.654	58.508	1.00 37.72
	ATOM	2517	CG	GLU	380	35.008	20.940	57.225	1.00 41.39
	ATOM	2518	CD	GLU	380	34.671	19.679	56.439	1.00 44.40
	ATOM	2519	OE1	GLU	380	33.991	18.792	57.003	1.00 45.17
	ATOM	2520	OE2	GLU	380	35.075	19.577	55.260	1.00 43.36
55	ATOM	2521	C	GLU	380	37.681	22.266	58.330	1.00 31.68
	ATOM	2522	O	GLU	380	37.643	22.958	59.346	1.00 28.60
	ATOM	2523	N	VAL	381	38.066	22.749	57.150	1.00 29.12
	ATOM	2524	CA	VAL	381	38.480	24.145	57.013	1.00 25.82
	ATOM	2525	CB	VAL	381	40.022	24.281	57.096	1.00 26.30
60	ATOM	2526	CG1	VAL	381	40.546	23.600	58.347	1.00 26.29
	ATOM	2527	CG2	VAL	381	40.669	23.673	55.855	1.00 26.07

	ATOM	2528	C	VAL	381	38.041	24.806	54.708	1.00	25.16
	ATOM	2529	O	VAL	381	37.528	24.150	54.799	1.00	24.70
	ATOM	2530	N	VAL	382	38.238	26.120	55.637	1.00	22.13
	ATOM	2531	CA	VAL	382	37.929	26.879	54.433	1.00	22.57
5	ATOM	2532	CB	VAL	382	37.533	28.341	54.764	1.00	23.19
	ATOM	2533	CG1	VAL	382	37.289	29.122	53.479	1.00	22.36
	ATOM	2534	CG2	VAL	382	36.279	28.355	55.636	1.00	21.95
	ATOM	2535	C	VAL	382	39.254	26.864	53.679	1.00	22.05
	ATOM	2536	O	VAL	382	40.199	27.551	54.056	1.00	22.15
10	ATOM	2537	N	CYS	383	39.331	26.059	52.626	1.00	22.87
	ATOM	2538	CA	CYS	383	40.561	25.937	51.857	1.00	22.31
	ATOM	2539	C	CYS	383	40.946	27.106	50.957	1.00	22.33
	ATOM	2540	O	CYS	383	42.134	27.335	50.723	1.00	22.41
	ATOM	2541	CB	CYS	383	40.521	24.664	51.018	1.00	23.58
15	ATOM	2542	SG	CYS	383	41.168	23.197	51.879	1.00	25.88
	ATOM	2543	N	HIS	384	39.958	27.841	50.456	1.00	21.14
	ATOM	2544	CA	HIS	384	40.231	28.961	49.558	1.00	19.98
	ATOM	2545	CB	HIS	384	38.954	29.761	49.286	1.00	17.69
	ATOM	2546	CG	HIS	384	39.075	30.695	48.123	1.00	16.80
20	ATOM	2547	CD2	HIS	384	39.392	32.009	48.067	1.00	16.85
	ATOM	2548	ND1	HIS	384	38.954	30.273	46.816	1.00	17.45
	ATOM	2549	CE1	HIS	384	39.196	31.287	46.004	1.00	17.61
	ATOM	2550	NE2	HIS	384	39.466	32.352	46.737	1.00	20.78
	ATOM	2551	C	HIS	384	41.309	29.884	50.124	1.00	19.92
25	ATOM	2552	O	HIS	384	41.173	30.412	51.226	1.00	19.94
	ATOM	2553	N	ALA	385	42.376	30.080	49.355	1.00	19.69
	ATOM	2554	CA	ALA	385	43.497	30.917	49.779	1.00	18.75
	ATOM	2555	CB	ALA	385	44.529	31.007	48.657	1.00	16.28
	ATOM	2556	C	ALA	385	43.110	32.322	50.228	1.00	17.94
30	ATOM	2557	O	ALA	385	42.298	32.990	49.589	1.00	16.36
	ATOM	2558	N	SER	386	43.708	32.769	51.328	1.00	19.03
	ATOM	2559	CA	SER	386	43.450	34.110	51.847	1.00	19.74
	ATOM	2560	CB	SER	386	42.098	34.163	52.581	1.00	20.01
	ATOM	2561	OG	SER	386	42.041	33.244	53.656	1.00	24.98
35	ATOM	2562	C	SER	386	44.576	34.584	52.767	1.00	19.49
	ATOM	2563	O	SER	386	45.305	33.775	53.355	1.00	20.16
	ATOM	2564	N	ALA	387	44.721	35.903	52.860	1.00	19.32
	ATOM	2565	CA	ALA	387	45.744	36.541	53.682	1.00	18.05
	ATOM	2566	CB	ALA	387	46.571	37.502	52.840	1.00	18.53
40	ATOM	2567	C	ALA	387	45.048	37.292	54.804	1.00	19.41
	ATOM	2568	O	ALA	387	44.006	37.922	54.594	1.00	18.50
	ATOM	2569	N	TRP	388	45.641	37.243	55.988	1.00	18.57
	ATOM	2570	CA	TRP	388	45.043	37.862	57.157	1.00	20.63
	ATOM	2571	CB	TRP	388	44.672	36.764	58.158	1.00	20.94
45	ATOM	2572	CG	TRP	388	43.693	35.759	57.626	1.00	20.63
	ATOM	2573	CD2	TRP	388	42.423	35.424	58.195	1.00	20.38
	ATOM	2574	CE2	TRP	388	41.847	34.427	57.374	1.00	20.45
	ATOM	2575	CE3	TRP	388	41.715	35.872	59.321	1.00	20.78
	ATOM	2576	CD1	TRP	388	43.834	34.974	56.513	1.00	21.13
50	ATOM	2577	NE1	TRP	388	42.728	34.171	56.356	1.00	19.97
	ATOM	2578	CZ2	TRP	388	40.591	33.867	57.645	1.00	21.53
	ATOM	2579	CZ3	TRP	388	40.464	35.315	59.590	1.00	22.62
	ATOM	2580	CH2	TRP	388	39.917	34.323	58.754	1.00	22.52
	ATOM	2581	C	TRP	388	45.873	38.923	57.877	1.00	21.09
55	ATOM	2582	O	TRP	388	47.062	38.734	58.148	1.00	20.91
	ATOM	2583	N	ASP	389	45.222	40.040	58.183	1.00	20.21
	ATOM	2584	CA	ASP	389	45.845	41.127	58.922	1.00	20.18
	ATOM	2585	CB	ASP	389	45.577	42.472	58.241	1.00	18.75
	ATOM	2586	CG	ASP	389	46.327	43.615	58.900	1.00	19.53
60	ATOM	2587	OD1	ASP	389	46.749	43.451	60.065	1.00	19.53
	ATOM	2588	OD2	ASP	389	46.492	44.676	58.261	1.00	18.57

	ATOM	2589	ASP	389	45.140	41.091	60.350	1.00	21.39	
	ATOM	2590	O	ASP	389	43.913	41.234	60.350	1.00	19.21
	ATOM	2591	N	PHE	390	45.894	40.875	61.358	1.00	21.15
	ATOM	2592	CA	PHE	390	45.286	40.819	62.687	1.00	23.78
5	ATOM	2593	CB	PHE	390	45.959	39.741	63.546	1.00	22.15
	ATOM	2594	CG	PHE	390	45.567	38.341	63.165	1.00	23.26
	ATOM	2595	CD1	PHE	390	46.029	37.771	61.983	1.00	21.17
	ATOM	2596	CD2	PHE	390	44.707	37.604	63.974	1.00	23.14
	ATOM	2597	CE1	PHE	390	45.640	36.490	61.608	1.00	22.67
10	ATOM	2598	CE2	PHE	390	44.310	36.321	63.610	1.00	25.19
	ATOM	2599	CZ	PHE	390	44.780	35.761	62.420	1.00	24.11
	ATOM	2600	C	PHE	390	45.289	42.159	63.414	1.00	24.86
	ATOM	2601	O	PHE	390	45.079	42.226	64.627	1.00	26.08
	ATOM	2602	N	TYR	391	45.529	43.218	62.649	1.00	26.25
15	ATOM	2603	CA	TYR	391	45.535	44.597	63.133	1.00	29.34
	ATOM	2604	CB	TYR	391	44.097	45.083	63.329	1.00	32.35
	ATOM	2605	CG	TYR	391	43.174	44.734	62.188	1.00	36.14
	ATOM	2606	CD1	TYR	391	42.490	43.521	62.172	1.00	38.33
	ATOM	2607	CE1	TYR	391	41.645	43.185	61.126	1.00	41.84
20	ATOM	2608	CD2	TYR	391	42.992	45.609	61.118	1.00	39.05
	ATOM	2609	CE2	TYR	391	42.148	45.281	60.059	1.00	42.44
	ATOM	2610	CZ	TYR	391	41.477	44.068	60.074	1.00	42.85
	ATOM	2611	OH	TYR	391	40.630	43.737	59.042	1.00	48.25
	ATOM	2612	C	TYR	391	46.334	44.960	64.382	1.00	29.54
25	ATOM	2613	O	TYR	391	45.897	45.802	65.166	1.00	30.88
	ATOM	2614	N	ASN	392	47.492	44.342	64.583	1.00	28.09
	ATOM	2615	CA	ASN	392	48.317	44.697	65.732	1.00	26.46
	ATOM	2616	CB	ASN	392	48.375	43.554	66.762	1.00	25.72
	ATOM	2617	CG	ASN	392	49.069	42.311	66.238	1.00	24.13
30	ATOM	2618	OD1	ASN	392	49.450	42.234	65.074	1.00	19.92
	ATOM	2619	ND2	ASN	392	49.232	41.324	67.110	1.00	24.99
	ATOM	2620	C	ASN	392	49.703	45.042	65.208	1.00	26.86
	ATOM	2621	O	ASN	392	50.630	45.301	65.974	1.00	26.07
	ATOM	2622	N	GLY	393	49.820	45.051	63.880	1.00	26.09
35	ATOM	2623	CA	GLY	393	51.075	45.371	63.225	1.00	24.15
	ATOM	2624	C	GLY	393	52.155	44.325	63.404	1.00	24.36
	ATOM	2625	O	GLY	393	53.313	44.560	63.061	1.00	25.32
	ATOM	2626	N	LYS	394	51.784	43.159	63.916	1.00	23.94
	ATOM	2627	CA	LYS	394	52.763	42.107	64.147	1.00	26.37
40	ATOM	2628	CB	LYS	394	53.069	42.017	65.645	1.00	29.65
	ATOM	2629	CG	LYS	394	54.522	42.251	65.990	1.00	35.63
	ATOM	2630	CD	LYS	394	54.954	43.660	65.631	1.00	38.94
	ATOM	2631	CE	LYS	394	54.438	44.665	66.640	1.00	42.85
	ATOM	2632	NZ	LYS	394	55.031	44.415	67.988	1.00	44.66
45	ATOM	2633	C	LYS	394	52.336	40.732	63.647	1.00	25.74
	ATOM	2634	O	LYS	394	53.145	39.984	63.097	1.00	26.30
	ATOM	2635	N	ASP	395	51.062	40.413	63.839	1.00	24.66
	ATOM	2636	CA	ASP	395	50.514	39.117	63.461	1.00	24.69
	ATOM	2637	CB	ASP	395	49.529	38.674	64.549	1.00	22.82
50	ATOM	2638	CG	ASP	395	49.088	37.237	64.402	1.00	24.52
	ATOM	2639	OD1	ASP	395	49.389	36.602	63.368	1.00	24.94
	ATOM	2640	OD2	ASP	395	48.424	36.738	65.333	1.00	27.00
	ATOM	2641	C	ASP	395	49.830	39.102	62.086	1.00	25.11
	ATOM	2642	O	ASP	395	48.725	39.631	61.919	1.00	23.47
55	ATOM	2643	N	PHE	396	50.498	38.498	61.106	1.00	24.32
	ATOM	2644	CA	PHE	396	49.955	38.383	59.750	1.00	23.41
	ATOM	2645	CB	PHE	396	50.783	39.188	58.743	1.00	23.60
	ATOM	2646	CG	PHE	396	51.136	40.571	59.203	1.00	24.38
	ATOM	2647	CD1	PHE	396	52.341	40.813	59.858	1.00	25.69
60	ATOM	2648	CD2	PHE	396	50.274	41.641	58.965	1.00	25.33
	ATOM	2649	CE1	PHE	396	52.687	42.104	60.267	1.00	23.83

	ATOM	2650	CE2	PHE	396	50.611	42.934	59.371	1.00	23.41
	ATOM	2651	CZ	PHE	396	51.821	43.164	60.023	1.00	23.93
	ATOM	2652	C	PHE	396	50.027	36.910	59.379	1.00	23.79
	ATOM	2653	O	PHE	396	51.023	36.246	59.670	1.00	24.61
5	ATOM	2654	N	ARG	397	48.984	36.394	58.736	1.00	23.34
	ATOM	2655	CA	ARG	397	48.973	34.984	58.371	1.00	21.97
	ATOM	2656	CB	ARG	397	48.245	34.166	59.443	1.00	22.90
	ATOM	2657	CG	ARG	397	48.555	34.552	60.881	1.00	23.65
	ATOM	2658	CD	ARG	397	47.710	33.717	61.832	1.00	24.02
10	ATOM	2659	NE	ARG	397	47.685	34.268	63.183	1.00	24.58
	ATOM	2660	CZ	ARG	397	46.977	33.755	64.184	1.00	25.68
	ATOM	2661	NH1	ARG	397	46.235	32.672	63.988	1.00	24.67
	ATOM	2662	NH2	ARG	397	46.998	34.333	65.377	1.00	25.68
	ATOM	2663	C	ARG	397	48.312	34.679	57.035	1.00	22.32
15	ATOM	2664	O	ARG	397	47.522	35.468	56.507	1.00	20.61
	ATOM	2665	N	ILE	398	48.636	33.504	56.505	1.00	22.29
	ATOM	2666	CA	ILE	398	48.057	33.029	55.260	1.00	20.95
	ATOM	2667	CB	ILE	398	49.137	32.891	54.154	1.00	20.55
	ATOM	2668	CG2	ILE	398	48.629	32.009	53.016	1.00	21.09
20	ATOM	2669	CG1	ILE	398	49.502	34.282	53.625	1.00	18.02
	ATOM	2670	CD1	ILE	398	50.575	34.283	52.548	1.00	17.26
	ATOM	2671	C	ILE	398	47.400	31.679	55.544	1.00	21.59
	ATOM	2672	O	ILE	398	47.938	30.862	56.300	1.00	21.62
	ATOM	2673	N	LYS	399	46.214	31.478	54.971	1.00	20.68
25	ATOM	2674	CA	LYS	399	45.453	30.239	55.115	1.00	19.59
	ATOM	2675	CB	LYS	399	44.115	30.495	55.818	1.00	19.25
	ATOM	2676	CG	LYS	399	43.236	29.248	55.912	1.00	20.50
	ATOM	2677	CD	LYS	399	41.796	29.585	56.296	1.00	20.84
	ATOM	2678	CE	LYS	399	41.143	30.517	55.274	1.00	19.03
30	ATOM	2679	NZ	LYS	399	41.207	29.974	53.882	1.00	17.95
	ATOM	2680	C	LYS	399	45.188	29.723	53.704	1.00	20.32
	ATOM	2681	O	LYS	399	44.379	30.291	52.966	1.00	17.80
	ATOM	2682	N	GLN	400	45.857	28.638	53.335	1.00	19.73
	ATOM	2683	CA	GLN	400	45.716	28.092	51.993	1.00	19.81
35	ATOM	2684	CB	GLN	400	46.701	28.819	51.074	1.00	20.96
	ATOM	2685	CG	GLN	400	46.652	28.439	49.606	1.00	22.65
	ATOM	2686	CD	GLN	400	47.679	29.200	48.788	1.00	23.34
	ATOM	2687	OE1	GLN	400	47.979	30.360	49.073	1.00	23.98
	ATOM	2688	NE2	GLN	400	48.213	28.556	47.757	1.00	25.85
40	ATOM	2689	C	GLN	400	46.013	26.601	51.986	1.00	20.97
	ATOM	2690	O	GLN	400	47.011	26.173	52.559	1.00	19.21
	ATOM	2691	N	CYS	401	45.148	25.810	51.356	1.00	22.51
	ATOM	2692	CA	CYS	401	45.389	24.372	51.268	1.00	24.18
	ATOM	2693	C	CYS	401	46.241	24.204	50.017	1.00	24.54
45	ATOM	2694	O	CYS	401	45.795	23.703	48.982	1.00	24.83
	ATOM	2695	CB	CYS	401	44.077	23.602	51.144	1.00	24.18
	ATOM	2696	SG	CYS	401	42.962	23.853	52.560	1.00	26.68
	ATOM	2697	N	THR	402	47.481	24.653	50.145	1.00	23.39
	ATOM	2698	CA	THR	402	48.455	24.649	49.072	1.00	23.83
50	ATOM	2699	CB	THR	402	49.761	25.296	49.553	1.00	24.60
	ATOM	2700	OG1	THR	402	49.458	26.532	50.214	1.00	24.98
	ATOM	2701	CG2	THR	402	50.694	25.564	48.377	1.00	24.72
	ATOM	2702	C	THR	402	48.789	23.295	48.468	1.00	23.55
	ATOM	2703	O	THR	402	49.037	22.323	49.178	1.00	22.36
55	ATOM	2704	N	THR	403	48.790	23.250	47.142	1.00	24.22
	ATOM	2705	CA	THR	403	49.142	22.044	46.407	1.00	25.66
	ATOM	2706	CB	THR	403	48.096	21.716	45.323	1.00	26.94
	ATOM	2707	OG1	THR	403	46.879	21.298	45.953	1.00	31.08
	ATOM	2708	CG2	THR	403	48.589	20.597	44.421	1.00	30.68
60	ATOM	2709	C	THR	403	50.482	22.350	45.752	1.00	24.67
	ATOM	2710	O	THR	403	50.747	23.494	45.377	1.00	24.35

	ATOM	2711	VAL	404	51.329	21.337	45.618	1.00	25.92
	ATOM	2712	CA VAL	404	52.644	21.533	45.021	1.00	25.04
	ATOM	2713	CB VAL	404	53.648	20.485	45.549	1.00	25.96
	ATOM	2714	CG1 VAL	404	55.024	20.725	44.949	1.00	24.79
5	ATOM	2715	CG2 VAL	404	53.716	20.557	47.068	1.00	24.67
	ATOM	2716	C VAL	404	52.632	21.494	43.493	1.00	25.52
	ATOM	2717	O VAL	404	52.737	20.429	42.881	1.00	26.04
	ATOM	2718	N ASN	405	52.491	22.671	42.893	1.00	24.32
	ATOM	2719	CA ASN	405	52.490	22.835	41.440	1.00	24.14
10	ATOM	2720	CB ASN	405	51.176	22.345	40.818	1.00	24.83
	ATOM	2721	CG ASN	405	49.954	22.969	41.456	1.00	27.35
	ATOM	2722	OD1 ASN	405	49.858	24.187	41.591	1.00	29.21
	ATOM	2723	ND2 ASN	405	49.004	22.132	41.842	1.00	28.69
	ATOM	2724	C ASN	405	52.702	24.311	41.133	1.00	24.79
15	ATOM	2725	O ASN	405	52.667	25.150	42.041	1.00	22.13
	ATOM	2726	N LEU	406	52.922	24.629	39.862	1.00	22.38
	ATOM	2727	CA LEU	406	53.167	26.005	39.459	1.00	24.32
	ATOM	2728	CB LEU	406	53.582	26.056	37.986	1.00	24.24
	ATOM	2729	CG LEU	406	53.912	27.439	37.417	1.00	26.51
20	ATOM	2730	CD1 LEU	406	54.969	28.127	38.280	1.00	25.09
	ATOM	2731	CD2 LEU	406	54.403	27.288	35.980	1.00	27.04
	ATOM	2732	C LEU	406	51.978	26.931	39.691	1.00	24.77
	ATOM	2733	O LEU	406	52.152	28.082	40.082	1.00	24.88
	ATOM	2734	N GLU	407	50.773	26.428	39.452	1.00	24.97
25	ATOM	2735	CA GLU	407	49.571	27.231	39.635	1.00	27.47
	ATOM	2736	CB GLU	407	48.334	26.392	39.285	1.00	29.90
	ATOM	2737	CG GLU	407	47.011	27.143	39.341	1.00	33.59
	ATOM	2738	CD GLU	407	45.921	26.457	38.527	1.00	36.42
	ATOM	2739	OE1 GLU	407	45.788	25.218	38.627	1.00	36.53
30	ATOM	2740	OE2 GLU	407	45.193	27.159	37.791	1.00	37.68
	ATOM	2741	C GLU	407	49.482	27.767	41.066	1.00	26.40
	ATOM	2742	O GLU	407	49.209	28.948	41.278	1.00	27.12
	ATOM	2743	N ASP	408	49.729	26.901	42.043	1.00	25.56
	ATOM	2744	CA ASP	408	49.683	27.303	43.448	1.00	26.24
35	ATOM	2745	CB ASP	408	49.567	26.070	44.345	1.00	28.50
	ATOM	2746	CG ASP	408	48.160	25.857	44.850	1.00	32.70
	ATOM	2747	OD1 ASP	408	47.216	26.002	44.047	1.00	38.19
	ATOM	2748	OD2 ASP	408	47.992	25.541	46.046	1.00	36.12
	ATOM	2749	C ASP	408	50.895	28.132	43.866	1.00	25.11
40	ATOM	2750	O ASP	408	50.853	28.837	44.873	1.00	23.90
	ATOM	2751	N LEU	409	51.980	28.039	43.103	1.00	22.82
	ATOM	2752	CA LEU	409	53.170	28.819	43.416	1.00	22.42
	ATOM	2753	CB LEU	409	54.349	28.401	42.532	1.00	23.11
	ATOM	2754	CG LEU	409	55.660	29.142	42.815	1.00	23.64
45	ATOM	2755	CD1 LEU	409	56.084	28.889	44.253	1.00	23.67
	ATOM	2756	CD2 LEU	409	56.739	28.674	41.855	1.00	23.00
	ATOM	2757	C LEU	409	52.811	30.274	43.140	1.00	21.63
	ATOM	2758	O LEU	409	53.165	31.175	43.906	1.00	19.27
	ATOM	2759	N VAL	410	52.100	30.491	42.037	1.00	19.69
50	ATOM	2760	CA VAL	410	51.664	31.829	41.666	1.00	20.55
	ATOM	2761	CB VAL	410	50.977	31.834	40.282	1.00	21.61
	ATOM	2762	CG1 VAL	410	50.409	33.215	39.983	1.00	20.73
	ATOM	2763	CG2 VAL	410	51.981	31.433	39.209	1.00	24.65
	ATOM	2764	C VAL	410	50.678	32.332	42.717	1.00	19.32
55	ATOM	2765	O VAL	410	50.747	33.485	43.138	1.00	20.39
	ATOM	2766	N VAL	411	49.766	31.465	43.150	1.00	19.65
	ATOM	2767	CA VAL	411	48.790	31.858	44.163	1.00	20.22
	ATOM	2768	CB VAL	411	47.767	30.730	44.439	1.00	20.61
	ATOM	2769	CG1 VAL	411	46.824	31.137	45.578	1.00	19.72
60	ATOM	2770	CG2 VAL	411	46.957	30.447	43.174	1.00	18.85
	ATOM	2771	C VAL	411	49.497	32.226	45.466	1.00	21.47

	ATOM	2772	O	VAL	411	49.085	33.150	45.171	1.00	20.05
	ATOM	2773	N	ALA	412	50.572	31.510	45.776	1.00	20.65
	ATOM	2774	CA	ALA	412	51.332	31.781	46.989	1.00	20.54
	ATOM	2775	CB	ALA	412	52.448	30.755	47.145	1.00	20.33
5	ATOM	2776	C	ALA	412	51.912	33.196	46.935	1.00	20.50
	ATOM	2777	O	ALA	412	51.902	33.915	47.934	1.00	20.25
	ATOM	2778	N	HIS	413	52.422	33.591	45.769	1.00	19.01
	ATOM	2779	CA	HIS	413	52.979	34.931	45.605	1.00	18.24
	ATOM	2780	CB	HIS	413	53.653	35.084	44.236	1.00	18.06
10	ATOM	2781	CG	HIS	413	55.006	34.452	44.161	1.00	17.97
	ATOM	2782	CD2	HIS	413	56.243	35.001	44.109	1.00	17.44
	ATOM	2783	ND1	HIS	413	55.193	33.087	44.199	1.00	18.68
	ATOM	2784	CE1	HIS	413	56.488	32.822	44.176	1.00	17.45
	ATOM	2785	NE2	HIS	413	57.146	33.965	44.123	1.00	17.19
15	ATOM	2786	C	HIS	413	51.861	35.950	45.736	1.00	16.58
	ATOM	2787	O	HIS	413	52.041	37.005	46.339	1.00	15.66
	ATOM	2788	N	HIS	414	50.708	35.623	45.158	1.00	16.88
	ATOM	2789	CA	HIS	414	49.534	36.492	45.212	1.00	16.63
	ATOM	2790	CB	HIS	414	48.320	35.785	44.596	1.00	17.03
20	ATOM	2791	CG	HIS	414	47.034	36.539	44.760	1.00	17.66
	ATOM	2792	CD2	HIS	414	46.091	36.491	45.732	1.00	16.85
	ATOM	2793	ND1	HIS	414	46.612	37.497	43.863	1.00	17.56
	ATOM	2794	CE1	HIS	414	45.463	38.005	44.275	1.00	17.61
	ATOM	2795	NE2	HIS	414	45.125	37.411	45.406	1.00	17.08
25	ATOM	2796	C	HIS	414	49.218	36.835	46.662	1.00	16.06
	ATOM	2797	O	HIS	414	49.070	38.006	47.017	1.00	17.09
	ATOM	2798	N	GLU	415	49.118	35.799	47.493	1.00	15.07
	ATOM	2799	CA	GLU	415	48.807	35.964	48.910	1.00	16.06
	ATOM	2800	CB	GLU	415	48.527	34.600	49.553	1.00	16.75
30	ATOM	2801	CG	GLU	415	47.327	33.845	48.972	1.00	16.11
	ATOM	2802	CD	GLU	415	46.013	34.599	49.145	1.00	16.59
	ATOM	2803	OE1	GLU	415	45.878	35.334	50.142	1.00	17.28
	ATOM	2804	OE2	GLU	415	45.109	34.444	48.292	1.00	15.42
	ATOM	2805	C	GLU	415	49.920	36.679	49.676	1.00	17.92
35	ATOM	2806	O	GLU	415	49.642	37.486	50.570	1.00	18.35
	ATOM	2807	N	MET	416	51.174	36.383	49.338	1.00	16.54
	ATOM	2808	CA	MET	416	52.295	37.034	50.008	1.00	17.95
	ATOM	2809	CB	MET	416	53.619	36.392	49.583	1.00	17.54
	ATOM	2810	CG	MET	416	53.855	35.041	50.243	1.00	19.19
40	ATOM	2811	SD	MET	416	54.175	35.197	52.034	1.00	21.75
	ATOM	2812	CE	MET	416	55.966	35.333	52.015	1.00	20.55
	ATOM	2813	C	MET	416	52.280	38.522	49.670	1.00	18.12
	ATOM	2814	O	MET	416	52.789	39.356	50.427	1.00	15.13
	ATOM	2815	N	GLY	417	51.680	38.840	48.526	1.00	17.95
45	ATOM	2816	CA	GLY	417	51.561	40.222	48.109	1.00	15.72
	ATOM	2817	C	GLY	417	50.621	40.942	49.066	1.00	15.92
	ATOM	2818	O	GLY	417	50.856	42.094	49.413	1.00	14.01
	ATOM	2819	N	HIS	418	49.551	40.268	49.487	1.00	16.50
	ATOM	2820	CA	HIS	418	48.603	40.861	50.434	1.00	17.17
50	ATOM	2821	CB	HIS	418	47.415	39.931	50.697	1.00	15.51
	ATOM	2822	CG	HIS	418	46.421	39.866	49.578	1.00	17.03
	ATOM	2823	CD2	HIS	418	45.843	38.807	48.963	1.00	15.43
	ATOM	2824	ND1	HIS	418	45.848	40.991	49.022	1.00	19.32
	ATOM	2825	CE1	HIS	418	44.958	40.626	48.115	1.00	17.79
55	ATOM	2826	NE2	HIS	418	44.935	39.306	48.060	1.00	17.55
	ATOM	2827	C	HIS	418	49.320	41.110	51.758	1.00	17.69
	ATOM	2828	O	HIS	418	49.163	42.167	52.370	1.00	16.65
	ATOM	2829	N	ILE	419	50.100	40.126	52.199	1.00	16.39
	ATOM	2830	CA	ILE	419	50.848	40.239	53.450	1.00	18.31
60	ATOM	2831	CB	ILE	419	51.640	38.941	53.745	1.00	17.86
	ATOM	2832	CG2	ILE	419	52.498	39.115	54.995	1.00	17.98

	ATOM	2833	ILE	419	50.668	37.767	53.100	1.00	17.08
	ATOM	2834	CD1 ILE	419	49.723	37.907	55.078	1.00	16.70
	ATOM	2835	C ILE	419	51.821	41.417	53.410	1.00	17.09
	ATOM	2836	O ILE	419	51.988	42.127	54.403	1.00	18.17
5	ATOM	2837	N GLN	420	52.457	41.628	52.260	1.00	17.68
	ATOM	2838	CA GLN	420	53.404	42.728	52.115	1.00	16.85
	ATOM	2839	CB GLN	420	54.093	42.677	50.746	1.00	17.05
	ATOM	2840	CG GLN	420	55.148	43.766	50.562	1.00	17.55
	ATOM	2841	CD GLN	420	56.380	43.547	51.428	1.00	18.80
10	ATOM	2842	OE1 GLN	420	57.049	44.501	51.824	1.00	17.97
	ATOM	2843	NE2 GLN	420	56.694	42.286	51.710	1.00	18.82
	ATOM	2844	C GLN	420	52.671	44.054	52.274	1.00	17.71
	ATOM	2845	O GLN	420	53.171	44.985	52.909	1.00	17.12
	ATOM	2846	N TYR	421	51.479	44.138	51.695	1.00	18.42
15	ATOM	2847	CA TYR	421	50.688	45.356	51.792	1.00	18.42
	ATOM	2848	CB TYR	421	49.418	45.217	50.943	1.00	16.41
	ATOM	2849	CG TYR	421	49.113	46.419	50.075	1.00	15.65
	ATOM	2850	CD1 TYR	421	48.661	46.257	48.764	1.00	14.49
	ATOM	2851	CE1 TYR	421	48.335	47.352	47.973	1.00	14.23
20	ATOM	2852	CD2 TYR	421	49.237	47.717	50.570	1.00	16.14
	ATOM	2853	CE2 TYR	421	48.913	48.825	49.783	1.00	15.24
	ATOM	2854	CZ TYR	421	48.459	48.633	48.486	1.00	16.86
	ATOM	2855	OH TYR	421	48.108	49.718	47.703	1.00	14.61
	ATOM	2856	C TYR	421	50.344	45.619	53.266	1.00	19.47
25	ATOM	2857	O TYR	421	50.473	46.746	53.744	1.00	19.23
	ATOM	2858	N PHE	422	49.928	44.577	53.986	1.00	19.13
	ATOM	2859	CA PHE	422	49.591	44.716	55.407	1.00	20.97
	ATOM	2860	CB PHE	422	49.260	43.353	56.029	1.00	19.61
	ATOM	2861	CG PHE	422	48.029	42.690	55.463	1.00	19.85
30	ATOM	2862	CD1 PHE	422	47.863	41.309	55.574	1.00	20.06
	ATOM	2863	CD2 PHE	422	47.038	43.434	54.829	1.00	18.91
	ATOM	2864	CE1 PHE	422	46.731	40.675	55.058	1.00	19.40
	ATOM	2865	CE2 PHE	422	45.898	42.807	54.312	1.00	18.30
	ATOM	2866	CZ PHE	422	45.748	41.425	54.427	1.00	18.76
35	ATOM	2867	C PHE	422	50.771	45.314	56.170	1.00	21.67
	ATOM	2868	O PHE	422	50.619	46.274	56.923	1.00	21.52
	ATOM	2869	N MET	423	51.950	44.737	55.964	1.00	21.08
	ATOM	2870	CA MET	423	53.153	45.196	56.644	1.00	21.47
	ATOM	2871	CB MET	423	54.316	44.237	56.373	1.00	21.55
40	ATOM	2872	CG MET	423	54.057	42.811	56.820	1.00	23.09
	ATOM	2873	SD MET	423	55.572	41.828	56.883	1.00	26.45
	ATOM	2874	CE MET	423	55.812	41.441	55.121	1.00	20.52
	ATOM	2875	C MET	423	53.560	46.610	56.257	1.00	22.13
	ATOM	2876	O MET	423	54.024	47.375	57.104	1.00	21.14
45	ATOM	2877	N GLN	424	53.381	46.957	54.985	1.00	21.08
	ATOM	2878	CA GLN	424	53.747	48.281	54.499	1.00	21.09
	ATOM	2879	CB GLN	424	53.668	48.326	52.967	1.00	21.81
	ATOM	2880	CG GLN	424	54.783	47.570	52.238	1.00	20.30
	ATOM	2881	CD GLN	424	56.145	48.214	52.419	1.00	21.34
50	ATOM	2882	OE1 GLN	424	56.248	49.415	52.677	1.00	21.87
	ATOM	2883	NE2 GLN	424	57.200	47.422	52.262	1.00	20.74
	ATOM	2884	C GLN	424	52.921	49.431	55.082	1.00	22.17
	ATOM	2885	O GLN	424	53.460	50.514	55.319	1.00	21.22
	ATOM	2886	N TYR	425	51.624	49.219	55.308	1.00	21.31
55	ATOM	2887	CA TYR	425	50.791	50.293	55.861	1.00	20.51
	ATOM	2888	CB TYR	425	49.551	50.538	54.975	1.00	18.49
	ATOM	2889	CG TYR	425	48.603	49.360	54.753	1.00	18.46
	ATOM	2890	CD1 TYR	425	48.144	48.581	55.820	1.00	16.90
	ATOM	2891	CE1 TYR	425	47.193	47.564	55.624	1.00	16.58
60	ATOM	2892	CD2 TYR	425	48.091	49.089	53.478	1.00	16.81
	ATOM	2893	CE2 TYR	425	47.139	48.083	53.272	1.00	16.87

	ATOM	2894	CZ	TYR	425	46.694	47.324	54.349	1.00	18.42
	ATOM	2895	OH	TYR	425	45.744	46.342	54.150	1.00	17.95
	ATOM	2896	C	TYR	425	50.354	50.082	57.310	1.00	21.09
	ATOM	2897	O	TYR	425	49.447	50.758	57.795	1.00	21.46
5	ATOM	2898	N	LYS	426	51.018	49.162	58.003	1.00	21.85
	ATOM	2899	CA	LYS	426	50.678	48.840	59.391	1.00	24.15
	ATOM	2900	CB	LYS	426	51.593	47.727	59.912	1.00	23.65
	ATOM	2901	CG	LYS	426	53.048	48.138	60.077	1.00	27.12
	ATOM	2902	CD	LYS	426	53.883	46.986	60.636	1.00	29.68
10	ATOM	2903	CE	LYS	426	55.337	47.396	60.853	1.00	32.06
	ATOM	2904	NZ	LYS	426	55.457	48.484	61.862	1.00	35.07
	ATOM	2905	C	LYS	426	50.708	50.007	60.383	1.00	24.45
	ATOM	2906	O	LYS	426	50.117	49.914	61.460	1.00	24.16
	ATOM	2907	N	ASP	427	51.385	51.098	60.033	1.00	25.44
15	ATOM	2908	CA	ASP	427	51.473	52.238	60.941	1.00	27.31
	ATOM	2909	CB	ASP	427	52.888	52.816	60.921	1.00	29.17
	ATOM	2910	CG	ASP	427	53.919	51.824	61.410	1.00	32.66
	ATOM	2911	OD1	ASP	427	53.697	51.226	62.484	1.00	34.11
	ATOM	2912	OD2	ASP	427	54.948	51.644	60.727	1.00	35.93
20	ATOM	2913	C	ASP	427	50.466	53.354	60.686	1.00	27.40
	ATOM	2914	O	ASP	427	50.487	54.382	61.362	1.00	27.53
	ATOM	2915	N	LEU	428	49.586	53.163	59.711	1.00	26.71
	ATOM	2916	CA	LEU	428	48.581	54.175	59.417	1.00	25.14
	ATOM	2917	CB	LEU	428	48.159	54.110	57.946	1.00	25.72
25	ATOM	2918	CG	LEU	428	49.169	54.334	56.819	1.00	24.48
	ATOM	2919	CD1	LEU	428	48.466	54.097	55.487	1.00	23.73
	ATOM	2920	CD2	LEU	428	49.731	55.743	56.878	1.00	24.31
	ATOM	2921	C	LEU	428	47.356	53.897	60.271	1.00	23.90
	ATOM	2922	O	LEU	428	47.199	52.798	60.801	1.00	23.96
30	ATOM	2923	N	PRO	429	46.477	54.897	60.433	1.00	23.83
	ATOM	2924	CD	PRO	429	46.585	56.303	60.003	1.00	22.86
	ATOM	2925	CA	PRO	429	45.267	54.676	61.232	1.00	24.74
	ATOM	2926	CB	PRO	429	44.497	55.977	61.046	1.00	22.89
	ATOM	2927	CG	PRO	429	45.593	56.993	60.911	1.00	23.44
35	ATOM	2928	C	PRO	429	44.555	53.484	60.584	1.00	25.64
	ATOM	2929	O	PRO	429	44.529	53.380	59.356	1.00	25.40
	ATOM	2930	N	VAL	430	43.986	52.590	61.390	1.00	26.24
	ATOM	2931	CA	VAL	430	43.320	51.404	60.854	1.00	26.47
	ATOM	2932	CB	VAL	430	42.621	50.590	61.972	1.00	29.13
40	ATOM	2933	CG1	VAL	430	43.660	50.035	62.933	1.00	28.70
	ATOM	2934	CG2	VAL	430	41.620	51.467	62.708	1.00	30.53
	ATOM	2935	C	VAL	430	42.307	51.672	59.743	1.00	25.82
	ATOM	2936	O	VAL	430	42.148	50.856	58.837	1.00	24.60
	ATOM	2937	N	ALA	431	41.629	52.812	59.802	1.00	24.76
45	ATOM	2938	CA	ALA	431	40.639	53.143	58.786	1.00	24.41
	ATOM	2939	CB	ALA	431	39.898	54.419	59.171	1.00	26.53
	ATOM	2940	C	ALA	431	41.286	53.313	57.419	1.00	23.48
	ATOM	2941	O	ALA	431	40.623	53.198	56.391	1.00	23.10
	ATOM	2942	N	LEU	432	42.587	53.583	57.407	1.00	23.44
50	ATOM	2943	CA	LEU	432	43.297	53.785	56.153	1.00	22.88
	ATOM	2944	CB	LEU	432	44.143	55.059	56.236	1.00	23.01
	ATOM	2945	CG	LEU	432	43.365	56.321	56.628	1.00	22.58
	ATOM	2946	CD1	LEU	432	44.321	57.500	56.716	1.00	21.61
	ATOM	2947	CD2	LEU	432	42.267	56.597	55.606	1.00	24.25
55	ATOM	2948	C	LEU	432	44.178	52.595	55.787	1.00	23.45
	ATOM	2949	O	LEU	432	44.974	52.666	54.844	1.00	23.80
	ATOM	2950	N	ARG	433	44.030	51.501	56.529	1.00	22.08
	ATOM	2951	CA	ARG	433	44.815	50.303	56.260	1.00	22.75
	ATOM	2952	CB	ARG	433	45.026	49.497	57.546	1.00	23.50
60	ATOM	2953	CG	ARG	433	45.849	50.225	58.607	1.00	26.73
	ATOM	2954	CD	ARG	433	46.193	49.307	59.779	1.00	29.04

				46.793	50.044	60.000	1.00	32.42
	ATOM	2955	ARG	433	47.191	49.492	62.031	1.00
	ATOM	2956	ARG	433	47.061	48.187	62.229	1.00
	ATOM	2957	NH1 ARG	433	47.710	50.252	62.986	1.00
	ATOM	2958	NH2 ARG	433	44.162	49.424	55.188	1.00
5	ATOM	2959	C ARG	433	43.635	48.347	55.474	1.00
	ATOM	2960	O ARG	433	44.188	49.914	53.954	1.00
	ATOM	2961	N GLU	434	43.644	49.196	52.803	1.00
	ATOM	2962	CA GLU	434	42.172	49.560	52.567	1.00
	ATOM	2963	CB GLU	434	41.226	49.009	53.624	1.00
10	ATOM	2964	CG GLU	434	40.542	50.099	54.420	1.00
	ATOM	2965	CD GLU	434	41.253	50.975	54.958	1.00
	ATOM	2966	OE1 GLU	434	39.295	50.078	54.515	1.00
	ATOM	2967	OE2 GLU	434	44.476	49.606	51.604	1.00
	ATOM	2968	C GLU	434	45.303	50.507	51.713	1.00
15	ATOM	2969	O GLU	434	44.271	48.945	50.466	1.00
	ATOM	2970	N GLY	435	45.031	49.296	49.276	1.00
	ATOM	2971	CA GLY	435	44.491	50.578	48.679	1.00
	ATOM	2972	C GLY	435	43.400	51.005	49.055	1.00
	ATOM	2973	O GLY	435	45.246	51.204	47.775	1.00
20	ATOM	2974	N ALA	436	44.799	52.442	47.123	1.00
	ATOM	2975	CA ALA	436	45.667	52.731	45.906	1.00
	ATOM	2976	CB ALA	436	43.336	52.215	46.722	1.00
	ATOM	2977	C ALA	436	42.493	53.097	46.842	1.00
	ATOM	2978	O ALA	436	43.066	51.020	46.212	1.00
25	ATOM	2979	N ASN	437	41.712	50.570	45.889	1.00
	ATOM	2980	CA ASN	437	41.185	51.088	44.526	1.00
	ATOM	2981	CB ASN	437	41.872	50.474	43.324	1.00
	ATOM	2982	CG ASN	437	42.105	49.269	43.261	1.00
	ATOM	2983	OD1 ASN	437	42.162	51.311	42.335	1.00
30	ATOM	2984	ND2 ASN	437	41.865	49.054	45.948	1.00
	ATOM	2985	C ASN	437	42.988	48.551	45.956	1.00
	ATOM	2986	O ASN	437	40.756	48.306	46.030	1.00
	ATOM	2987	N PRO	438	39.350	48.730	46.157	1.00
	ATOM	2988	CD PRO	438	40.869	46.846	46.105	1.00
35	ATOM	2989	CA PRO	438	39.413	46.391	46.059	1.00
	ATOM	2990	CB PRO	438	38.712	47.508	46.793	1.00
	ATOM	2991	CG PRO	438	41.737	46.185	45.039	1.00
	ATOM	2992	C PRO	438	42.379	45.170	45.306	1.00
	ATOM	2993	O PRO	438	41.760	46.760	43.840	1.00
40	ATOM	2994	N GLY	439	42.563	46.201	42.766	1.00
	ATOM	2995	CA GLY	439	44.051	46.182	43.070	1.00
	ATOM	2996	C GLY	439	44.741	45.203	42.776	1.00
	ATOM	2997	O GLY	439	44.553	47.269	43.649	1.00
	ATOM	2998	N PHE	440	45.968	47.364	44.006	1.00
45	ATOM	2999	CA PHE	440	46.262	48.708	44.691	1.00
	ATOM	3000	CB PHE	440	46.467	49.856	43.736	1.00
	ATOM	3001	CG PHE	440	45.474	50.226	42.836	1.00
	ATOM	3002	CD1 PHE	440	47.658	50.580	43.753	1.00
	ATOM	3003	CD2 PHE	440	45.663	51.307	41.962	1.00
50	ATOM	3004	CE1 PHE	440	47.856	51.655	42.890	1.00
	ATOM	3005	CE2 PHE	440	46.857	52.019	41.993	1.00
	ATOM	3006	CZ PHE	440	46.369	46.235	44.954	1.00
	ATOM	3007	C PHE	440	47.432	45.629	44.807	1.00
	ATOM	3008	O PHE	440	45.521	45.962	45.940	1.00
55	ATOM	3009	N HIS	441	45.813	44.911	46.910	1.00
	ATOM	3010	CA HIS	441	44.703	44.833	47.964	1.00
	ATOM	3011	CB HIS	441	45.209	44.750	49.374	1.00
	ATOM	3012	CG HIS	441	44.960	45.526	50.456	1.00
	ATOM	3013	CD2 HIS	441	46.073	43.763	49.802	1.00
60	ATOM	3014	ND1 HIS	441	46.332	43.935	51.087	1.00
	ATOM	3015	CE1 HIS	441				

	ATOM	3017	NE2	HIS	441	45.669	44.998	46.508	1.00	15.07
	ATOM	3017	C	HIS	441	45.958	43.555	46.220	1.00	16.92
	ATOM	3018	O	HIS	441	46.813	42.747	46.592	1.00	15.31
	ATOM	3019	N	GLU	442	45.122	43.311	45.214	1.00	16.74
5	ATOM	3020	CA	GLU	442	45.162	42.049	44.482	1.00	15.92
	ATOM	3021	CB	GLU	442	43.861	41.851	43.701	1.00	15.02
	ATOM	3022	CG	GLU	442	42.590	41.822	44.542	1.00	11.10
	ATOM	3023	CD	GLU	442	42.635	40.757	45.617	1.00	11.15
	ATOM	3024	OE1	GLU	442	43.250	39.697	45.371	1.00	14.00
10	ATOM	3025	OE2	GLU	442	42.055	40.975	46.699	1.00	11.81
	ATOM	3026	C	GLU	442	46.329	41.955	43.497	1.00	17.24
	ATOM	3027	O	GLU	442	46.778	40.859	43.162	1.00	16.84
	ATOM	3028	N	ALA	443	46.826	43.100	43.039	1.00	15.95
	ATOM	3029	CA	ALA	443	47.894	43.114	42.041	1.00	17.36
15	ATOM	3030	CB	ALA	443	47.799	44.404	41.221	1.00	15.87
	ATOM	3031	C	ALA	443	49.343	42.907	42.491	1.00	16.95
	ATOM	3032	O	ALA	443	50.135	42.328	41.750	1.00	17.94
	ATOM	3033	N	ILE	444	49.692	43.374	43.686	1.00	16.73
	ATOM	3034	CA	ILE	444	51.070	43.264	44.176	1.00	15.92
20	ATOM	3035	CB	ILE	444	51.166	43.630	45.671	1.00	15.04
	ATOM	3036	CG2	ILE	444	52.631	43.664	46.095	1.00	16.89
	ATOM	3037	CG1	ILE	444	50.502	44.990	45.927	1.00	14.90
	ATOM	3038	CD1	ILE	444	51.112	46.139	45.153	1.00	15.89
	ATOM	3039	C	ILE	444	51.744	41.902	43.980	1.00	16.43
25	ATOM	3040	O	ILE	444	52.792	41.807	43.332	1.00	15.13
	ATOM	3041	N	GLY	445	51.155	40.858	44.554	1.00	15.53
	ATOM	3042	CA	GLY	445	51.724	39.528	44.427	1.00	16.88
	ATOM	3043	C	GLY	445	51.844	39.072	42.985	1.00	18.50
	ATOM	3044	O	GLY	445	52.866	38.512	42.581	1.00	17.19
30	ATOM	3045	N	ASP	446	50.796	39.317	42.205	1.00	16.96
	ATOM	3046	CA	ASP	446	50.775	38.935	40.795	1.00	17.24
	ATOM	3047	CB	ASP	446	49.438	39.334	40.157	1.00	15.35
	ATOM	3048	CG	ASP	446	48.291	38.426	40.579	1.00	17.38
	ATOM	3049	OD1	ASP	446	48.298	37.936	41.728	1.00	14.96
35	ATOM	3050	OD2	ASP	446	47.370	38.212	39.761	1.00	16.72
	ATOM	3051	C	ASP	446	51.919	39.572	40.016	1.00	18.31
	ATOM	3052	O	ASP	446	52.503	38.939	39.132	1.00	16.77
	ATOM	3053	N	VAL	447	52.234	40.829	40.328	1.00	18.18
	ATOM	3054	CA	VAL	447	53.314	41.508	39.629	1.00	18.02
40	ATOM	3055	CB	VAL	447	53.542	42.935	40.158	1.00	17.59
	ATOM	3056	CG1	VAL	447	54.795	43.520	39.514	1.00	20.25
	ATOM	3057	CG2	VAL	447	52.330	43.816	39.831	1.00	15.79
	ATOM	3058	C	VAL	447	54.611	40.716	39.765	1.00	18.36
	ATOM	3059	O	VAL	447	55.293	40.471	38.773	1.00	17.66
45	ATOM	3060	N	LEU	448	54.948	40.312	40.986	1.00	18.09
	ATOM	3061	CA	LEU	448	56.167	39.543	41.194	1.00	18.49
	ATOM	3062	CB	LEU	448	56.464	39.378	42.691	1.00	17.75
	ATOM	3063	CG	LEU	448	57.233	40.500	43.405	1.00	18.33
	ATOM	3064	CD1	LEU	448	56.458	41.811	43.359	1.00	17.13
50	ATOM	3065	CD2	LEU	448	57.487	40.082	44.848	1.00	18.72
	ATOM	3066	C	LEU	448	56.053	38.170	40.529	1.00	19.50
	ATOM	3067	O	LEU	448	57.011	37.682	39.930	1.00	20.72
	ATOM	3068	N	ALA	449	54.879	37.551	40.627	1.00	18.48
	ATOM	3069	CA	ALA	449	54.671	36.240	40.028	1.00	18.81
55	ATOM	3070	CB	ALA	449	53.260	35.731	40.337	1.00	18.00
	ATOM	3071	C	ALA	449	54.905	36.272	38.518	1.00	17.58
	ATOM	3072	O	ALA	449	55.285	35.261	37.925	1.00	17.76
	ATOM	3073	N	LEU	450	54.677	37.424	37.890	1.00	16.49
	ATOM	3074	CA	LEU	450	54.898	37.536	36.449	1.00	16.51
60	ATOM	3075	CB	LEU	450	54.516	38.933	35.935	1.00	15.69
	ATOM	3076	CG	LEU	450	53.027	39.294	35.797	1.00	14.12

	ATOM	3077	LEU	450	52.887	40.749	35.3	1.00	12.95
	ATOM	3078	CD2 LEU	450	52.356	38.385	34.770	1.00	15.02
	ATOM	3079	C LEU	450	56.376	37.262	36.150	1.00	18.30
	ATOM	3080	O LEU	450	56.702	36.552	35.196	1.00	17.45
5	ATOM	3081	N SER	451	57.266	37.824	36.966	1.00	18.19
	ATOM	3082	CA SER	451	58.701	37.617	36.777	1.00	18.99
	ATOM	3083	CB SER	451	59.507	38.572	37.663	1.00	16.95
	ATOM	3084	OG SER	451	59.480	39.890	37.141	1.00	17.53
	ATOM	3085	C SER	451	59.092	36.178	37.092	1.00	19.71
10	ATOM	3086	O SER	451	59.896	35.575	36.383	1.00	20.72
	ATOM	3087	N VAL	452	58.520	35.635	38.160	1.00	21.54
	ATOM	3088	CA VAL	452	58.798	34.263	38.574	1.00	22.76
	ATOM	3089	CB VAL	452	57.997	33.893	39.843	1.00	22.77
	ATOM	3090	CG1 VAL	452	58.217	32.428	40.195	1.00	25.58
15	ATOM	3091	CG2 VAL	452	58.419	34.781	40.997	1.00	25.93
	ATOM	3092	C VAL	452	58.435	33.259	37.482	1.00	24.01
	ATOM	3093	O VAL	452	59.112	32.243	37.307	1.00	23.13
	ATOM	3094	N SER	453	57.358	33.552	36.757	1.00	22.60
	ATOM	3095	CA SER	453	56.870	32.678	35.693	1.00	23.40
20	ATOM	3096	CB SER	453	55.434	33.067	35.317	1.00	21.89
	ATOM	3097	OG SER	453	54.546	32.810	36.393	1.00	20.22
	ATOM	3098	C SER	453	57.715	32.622	34.424	1.00	22.87
	ATOM	3099	O SER	453	57.563	31.697	33.631	1.00	22.16
	ATOM	3100	N THR	454	58.592	33.602	34.219	1.00	23.18
25	ATOM	3101	CA THR	454	59.420	33.601	33.016	1.00	24.33
	ATOM	3102	CB THR	454	60.373	34.817	32.972	1.00	23.24
	ATOM	3103	OG1 THR	454	61.199	34.827	34.143	1.00	24.32
	ATOM	3104	CG2 THR	454	59.576	36.115	32.894	1.00	24.49
	ATOM	3105	C THR	454	60.240	32.313	32.940	1.00	25.55
30	ATOM	3106	O THR	454	60.749	31.827	33.949	1.00	25.28
	ATOM	3107	N PRO	455	60.368	31.738	31.734	1.00	25.92
	ATOM	3108	CD PRO	455	59.860	32.211	30.433	1.00	26.48
	ATOM	3109	CA PRO	455	61.134	30.499	31.574	1.00	27.37
	ATOM	3110	CB PRO	455	61.238	30.351	30.058	1.00	27.14
35	ATOM	3111	CG PRO	455	59.949	30.959	29.578	1.00	25.75
	ATOM	3112	C PRO	455	62.499	30.573	32.245	1.00	27.20
	ATOM	3113	O PRO	455	62.909	29.646	32.946	1.00	26.66
	ATOM	3114	N LYS	456	63.193	31.688	32.045	1.00	28.50
	ATOM	3115	CA LYS	456	64.513	31.851	32.626	1.00	29.18
40	ATOM	3116	CB LYS	456	65.150	33.161	32.164	1.00	31.89
	ATOM	3117	CG LYS	456	66.669	33.142	32.280	1.00	36.40
	ATOM	3118	CD LYS	456	67.296	34.487	31.959	1.00	39.36
	ATOM	3119	CE LYS	456	68.815	34.374	31.932	1.00	40.98
	ATOM	3120	NZ LYS	456	69.335	33.657	33.129	1.00	43.02
45	ATOM	3121	C LYS	456	64.501	31.795	34.151	1.00	29.42
	ATOM	3122	O LYS	456	65.366	31.151	34.753	1.00	28.75
	ATOM	3123	N HIS	457	63.534	32.458	34.785	1.00	24.85
	ATOM	3124	CA HIS	457	63.486	32.427	36.242	1.00	23.20
	ATOM	3125	CB HIS	457	62.439	33.397	36.791	1.00	23.95
50	ATOM	3126	CG HIS	457	62.503	33.558	38.278	1.00	23.17
	ATOM	3127	CD2 HIS	457	61.930	32.846	39.277	1.00	23.50
	ATOM	3128	ND1 HIS	457	63.300	34.501	38.892	1.00	24.07
	ATOM	3129	CE1 HIS	457	63.218	34.360	40.203	1.00	25.29
	ATOM	3130	NE2 HIS	457	62.393	33.361	40.463	1.00	25.90
55	ATOM	3131	C HIS	457	63.167	31.019	36.738	1.00	23.20
	ATOM	3132	O HIS	457	63.768	30.541	37.701	1.00	21.36
	ATOM	3133	N LEU	458	62.208	30.362	36.089	1.00	24.06
	ATOM	3134	CA LEU	458	61.835	29.010	36.481	1.00	25.22
	ATOM	3135	CB LEU	458	60.694	28.486	35.600	1.00	25.32
60	ATOM	3136	CG LEU	458	59.302	29.096	35.812	1.00	24.79
	ATOM	3137	CD1 LEU	458	58.314	28.482	34.827	1.00	24.94

	ATOM	3138	CD2	LEU	458	58.848	28.852	28.249	1.00	24.07
	ATOM	3139	C	LEU	458	63.058	28.105	36.350	1.00	26.11
	ATOM	3140	O	LEU	458	63.265	27.204	37.157	1.00	24.93
	ATOM	3141	N	HIS	459	63.875	28.356	35.334	1.00	28.43
5	ATOM	3142	CA	HIS	459	65.070	27.548	35.140	1.00	31.28
	ATOM	3143	CB	HIS	459	65.731	27.872	33.799	1.00	33.71
	ATOM	3144	CG	HIS	459	66.959	27.060	33.521	1.00	39.54
	ATOM	3145	CD2	HIS	459	67.152	25.977	32.730	1.00	40.92
10	ATOM	3146	ND1	HIS	459	68.174	27.316	34.120	1.00	42.70
	ATOM	3147	CE1	HIS	459	69.062	26.427	33.711	1.00	42.68
	ATOM	3148	NE2	HIS	459	68.467	25.603	32.867	1.00	43.45
	ATOM	3149	C	HIS	459	66.053	27.782	36.283	1.00	30.04
	ATOM	3150	O	HIS	459	66.755	26.861	36.699	1.00	29.57
	ATOM	3151	N	SER	460	66.087	29.008	36.803	1.00	28.70
15	ATOM	3152	CA	SER	460	66.997	29.335	37.897	1.00	27.62
	ATOM	3153	CB	SER	460	67.034	30.850	38.142	1.00	27.69
	ATOM	3154	OG	SER	460	65.945	31.283	38.942	1.00	27.73
	ATOM	3155	C	SER	460	66.579	28.613	39.174	1.00	27.55
	ATOM	3156	O	SER	460	67.380	28.446	40.091	1.00	26.24
20	ATOM	3157	N	LEU	461	65.321	28.186	39.228	1.00	26.91
	ATOM	3158	CA	LEU	461	64.808	27.463	40.388	1.00	29.43
	ATOM	3159	CB	LEU	461	63.337	27.813	40.641	1.00	27.64
	ATOM	3160	CG	LEU	461	63.027	29.239	41.101	1.00	28.24
	ATOM	3161	CD1	LEU	461	61.523	29.462	41.111	1.00	28.05
25	ATOM	3162	CD2	LEU	461	63.611	29.461	42.488	1.00	27.97
	ATOM	3163	C	LEU	461	64.931	25.971	40.119	1.00	30.51
	ATOM	3164	O	LEU	461	64.528	25.142	40.938	1.00	31.19
	ATOM	3165	N	ASN	462	65.491	25.649	38.957	1.00	32.47
	ATOM	3166	CA	ASN	462	65.684	24.272	38.523	1.00	34.80
30	ATOM	3167	CB	ASN	462	66.447	23.484	39.594	1.00	35.75
	ATOM	3168	CG	ASN	462	67.114	22.241	39.036	1.00	38.55
	ATOM	3169	OD1	ASN	462	67.732	22.283	37.973	1.00	38.16
	ATOM	3170	ND2	ASN	462	67.006	21.132	39.758	1.00	39.43
	ATOM	3171	C	ASN	462	64.337	23.607	38.222	1.00	36.15
35	ATOM	3172	O	ASN	462	64.154	22.414	38.466	1.00	35.72
	ATOM	3173	N	LEU	463	63.402	24.391	37.689	1.00	36.82
	ATOM	3174	CA	LEU	463	62.074	23.886	37.345	1.00	39.43
	ATOM	3175	CB	LEU	463	60.987	24.713	38.038	1.00	37.66
	ATOM	3176	CG	LEU	463	60.997	24.667	39.569	1.00	37.31
40	ATOM	3177	CD1	LEU	463	59.836	25.492	40.111	1.00	36.51
	ATOM	3178	CD2	LEU	463	60.898	23.227	40.046	1.00	36.47
	ATOM	3179	C	LEU	463	61.851	23.900	35.839	1.00	41.12
	ATOM	3180	O	LEU	463	60.771	23.568	35.355	1.00	42.26
	ATOM	3181	N	LEU	464	62.880	24.307	35.105	1.00	43.53
45	ATOM	3182	CA	LEU	464	62.832	24.341	33.647	1.00	46.78
	ATOM	3183	CB	LEU	464	62.358	25.707	33.131	1.00	47.15
	ATOM	3184	CG	LEU	464	60.846	25.963	33.126	1.00	47.86
	ATOM	3185	CD1	LEU	464	60.553	27.253	32.374	1.00	48.43
	ATOM	3186	CD2	LEU	464	60.122	24.801	32.457	1.00	48.04
50	ATOM	3187	C	LEU	464	64.217	24.032	33.097	1.00	47.91
	ATOM	3188	O	LEU	464	65.208	24.081	33.830	1.00	48.74
	ATOM	3189	N	SER	465	64.282	23.702	31.812	1.00	49.72
	ATOM	3190	CA	SER	465	65.552	23.375	31.173	1.00	51.10
	ATOM	3191	CB	SER	465	65.619	21.873	30.887	1.00	51.49
55	ATOM	3192	OG	SER	465	64.505	21.452	30.117	1.00	52.92
	ATOM	3193	C	SER	465	65.745	24.157	29.879	1.00	51.56
	ATOM	3194	O	SER	465	66.428	25.182	29.860	1.00	52.18
	ATOM	3195	N	GLY	470	64.653	32.326	21.785	1.00	48.10
	ATOM	3196	CA	GLY	470	63.950	31.478	20.839	1.00	48.51
60	ATOM	3197	C	GLY	470	62.522	31.928	20.591	1.00	47.84
	ATOM	3198	O	GLY	470	61.718	31.998	21.520	1.00	48.31

	ATOM	3199	ALA	471	62.202	32.229	19.3	1.00	46.54	
	ATOM	3200	CA	ALA	471	60.864	32.681	18.976	1.00	45.12
	ATOM	3201	CB	ALA	471	60.799	32.979	17.485	1.00	46.24
	ATOM	3202	C	ALA	471	59.799	31.654	19.351	1.00	44.20
5	ATOM	3203	O	ALA	471	58.843	31.976	20.056	1.00	44.05
	ATOM	3204	N	GLU	472	59.965	30.420	18.883	1.00	41.85
	ATOM	3205	CA	GLU	472	59.002	29.367	19.178	1.00	40.72
	ATOM	3206	CB	GLU	472	59.411	28.062	18.492	1.00	40.77
	ATOM	3207	CG	GLU	472	59.039	28.041	17.019	1.00	43.32
10	ATOM	3208	CD	GLU	472	59.363	26.728	16.336	1.00	44.64
	ATOM	3209	OE1	GLU	472	59.319	25.675	17.008	1.00	44.66
	ATOM	3210	OE2	GLU	472	59.641	26.753	15.117	1.00	46.17
	ATOM	3211	C	GLU	472	58.810	29.146	20.672	1.00	39.99
	ATOM	3212	O	GLU	472	57.724	28.762	21.111	1.00	37.39
15	ATOM	3213	N	HIS	473	59.859	29.380	21.454	1.00	39.00
	ATOM	3214	CA	HIS	473	59.746	29.226	22.896	1.00	38.09
	ATOM	3215	CB	HIS	473	61.121	29.080	23.551	1.00	40.74
	ATOM	3216	CG	HIS	473	61.664	27.684	23.510	1.00	43.40
	ATOM	3217	CD2	HIS	473	61.475	26.632	24.341	1.00	44.06
20	ATOM	3218	ND1	HIS	473	62.501	27.236	22.510	1.00	45.60
	ATOM	3219	CE1	HIS	473	62.805	25.969	22.729	1.00	45.16
	ATOM	3220	NE2	HIS	473	62.195	25.578	23.833	1.00	45.60
	ATOM	3221	C	HIS	473	59.032	30.449	23.453	1.00	36.31
	ATOM	3222	O	HIS	473	58.367	30.368	24.482	1.00	36.98
25	ATOM	3223	N	ASP	474	59.172	31.581	22.766	1.00	34.37
	ATOM	3224	CA	ASP	474	58.516	32.810	23.187	1.00	34.17
	ATOM	3225	CB	ASP	474	59.000	34.009	22.365	1.00	38.03
	ATOM	3226	CG	ASP	474	60.243	34.647	22.937	1.00	41.09
	ATOM	3227	OD1	ASP	474	60.257	34.930	24.154	1.00	42.53
30	ATOM	3228	OD2	ASP	474	61.202	34.878	22.169	1.00	43.99
	ATOM	3229	C	ASP	474	57.007	32.692	23.021	1.00	32.16
	ATOM	3230	O	ASP	474	56.248	33.095	23.903	1.00	30.43
	ATOM	3231	N	ILE	475	56.580	32.153	21.880	1.00	28.89
	ATOM	3232	CA	ILE	475	55.159	31.996	21.595	1.00	25.76
35	ATOM	3233	CB	ILE	475	54.922	31.577	20.122	1.00	26.10
	ATOM	3234	CG2	ILE	475	53.425	31.456	19.838	1.00	22.06
	ATOM	3235	CG1	ILE	475	55.544	32.613	19.183	1.00	23.79
	ATOM	3236	CD1	ILE	475	54.998	34.015	19.363	1.00	25.45
	ATOM	3237	C	ILE	475	54.539	30.962	22.526	1.00	24.56
40	ATOM	3238	O	ILE	475	53.422	31.150	23.009	1.00	23.51
	ATOM	3239	N	ASN	476	55.258	29.869	22.775	1.00	22.07
	ATOM	3240	CA	ASN	476	54.749	28.843	23.673	1.00	22.59
	ATOM	3241	CB	ASN	476	55.718	27.658	23.777	1.00	22.82
	ATOM	3242	CG	ASN	476	55.557	26.656	22.640	1.00	23.84
45	ATOM	3243	OD1	ASN	476	54.640	26.756	21.822	1.00	23.67
	ATOM	3244	ND2	ASN	476	56.451	25.674	22.595	1.00	22.00
	ATOM	3245	C	ASN	476	54.564	29.465	25.057	1.00	22.14
	ATOM	3246	O	ASN	476	53.554	29.231	25.721	1.00	20.32
	ATOM	3247	N	PHE	477	55.544	30.258	25.487	1.00	19.74
50	ATOM	3248	CA	PHE	477	55.473	30.907	26.795	1.00	20.07
	ATOM	3249	CB	PHE	477	56.779	31.630	27.118	1.00	19.28
	ATOM	3250	CG	PHE	477	56.697	32.491	28.348	1.00	19.26
	ATOM	3251	CD1	PHE	477	56.387	31.930	29.582	1.00	19.77
	ATOM	3252	CD2	PHE	477	56.908	33.861	28.270	1.00	18.99
55	ATOM	3253	CE1	PHE	477	56.288	32.721	30.723	1.00	20.49
	ATOM	3254	CE2	PHE	477	56.811	34.664	29.404	1.00	21.68
	ATOM	3255	CZ	PHE	477	56.501	34.091	30.634	1.00	20.79
	ATOM	3256	C	PHE	477	54.327	31.910	26.879	1.00	18.41
	ATOM	3257	O	PHE	477	53.558	31.907	27.840	1.00	17.57
60	ATOM	3258	N	LEU	478	54.230	32.782	25.882	1.00	16.70
	ATOM	3259	CA	LEU	478	53.171	33.778	25.858	1.00	17.73

	ATOM	3260	CB	LEU	478	53.315	34.692	24.534	1.00	18.54
	ATOM	3261	CG	LEU	478	54.441	35.733	24.725	1.00	18.88
	ATOM	3262	CD1	LEU	478	54.594	36.453	23.399	1.00	20.51
	ATOM	3263	CD2	LEU	478	54.133	36.732	25.835	1.00	21.13
5	ATOM	3264	C	LEU	478	51.808	33.094	25.857	1.00	17.77
	ATOM	3265	O	LEU	478	50.859	33.602	26.454	1.00	16.81
	ATOM	3266	N	MET	479	51.710	31.943	25.192	1.00	16.85
	ATOM	3267	CA	MET	479	50.447	31.207	25.155	1.00	16.42
	ATOM	3268	CB	MET	479	50.523	30.020	24.187	1.00	16.54
10	ATOM	3269	CG	MET	479	49.265	29.145	24.170	1.00	15.90
	ATOM	3270	SD	MET	479	47.741	30.068	23.800	1.00	20.51
	ATOM	3271	CE	MET	479	47.978	30.453	22.101	1.00	14.74
	ATOM	3272	C	MET	479	50.112	30.697	26.552	1.00	18.16
	ATOM	3273	O	MET	479	48.965	30.772	26.987	1.00	16.49
15	ATOM	3274	N	LYS	480	51.108	30.169	27.257	1.00	17.20
	ATOM	3275	CA	LYS	480	50.852	29.673	28.600	1.00	19.57
	ATOM	3276	CB	LYS	480	52.117	29.038	29.191	1.00	22.36
	ATOM	3277	CG	LYS	480	51.837	28.140	30.387	1.00	27.80
	ATOM	3278	CD	LYS	480	53.012	27.221	30.741	1.00	33.74
20	ATOM	3279	CE	LYS	480	54.250	28.002	31.184	1.00	37.33
	ATOM	3280	NZ	LYS	480	55.332	27.126	31.746	1.00	39.64
	ATOM	3281	C	LYS	480	50.368	30.835	29.478	1.00	17.85
	ATOM	3282	O	LYS	480	49.420	30.689	30.247	1.00	18.61
	ATOM	3283	N	MET	481	51.006	31.992	29.343	1.00	15.91
25	ATOM	3284	CA	MET	481	50.619	33.165	30.123	1.00	16.21
	ATOM	3285	CB	MET	481	51.627	34.302	29.925	1.00	15.78
	ATOM	3286	CG	MET	481	53.019	34.045	30.504	1.00	17.36
	ATOM	3287	SD	MET	481	53.024	33.719	32.288	1.00	23.53
	ATOM	3288	CE	MET	481	52.210	35.205	32.913	1.00	14.65
30	ATOM	3289	C	MET	481	49.224	33.662	29.740	1.00	14.73
	ATOM	3290	O	MET	481	48.430	34.029	30.605	1.00	15.28
	ATOM	3291	N	ALA	482	48.930	33.672	28.444	1.00	12.83
	ATOM	3292	CA	ALA	482	47.635	34.144	27.966	1.00	14.42
	ATOM	3293	CB	ALA	482	47.640	34.229	26.440	1.00	12.60
35	ATOM	3294	C	ALA	482	46.485	33.254	28.432	1.00	13.98
	ATOM	3295	O	ALA	482	45.404	33.737	28.742	1.00	12.54
	ATOM	3296	N	LEU	483	46.721	31.950	28.469	1.00	12.96
	ATOM	3297	CA	LEU	483	45.687	31.019	28.889	1.00	15.49
	ATOM	3298	CB	LEU	483	46.221	29.581	28.845	1.00	13.86
40	ATOM	3299	CG	LEU	483	46.433	29.004	27.438	1.00	12.19
	ATOM	3300	CD1	LEU	483	47.119	27.645	27.522	1.00	12.00
	ATOM	3301	CD2	LEU	483	45.099	28.868	26.744	1.00	11.05
	ATOM	3302	C	LEU	483	45.172	31.377	30.286	1.00	15.60
	ATOM	3303	O	LEU	483	44.029	31.076	30.633	1.00	13.79
45	ATOM	3304	N	ASP	484	46.011	32.026	31.088	1.00	17.99
	ATOM	3305	CA	ASP	484	45.579	32.432	32.421	1.00	19.85
	ATOM	3306	CB	ASP	484	46.675	32.186	33.457	1.00	23.35
	ATOM	3307	CG	ASP	484	46.697	30.752	33.950	1.00	31.47
	ATOM	3308	OD1	ASP	484	45.708	30.017	33.703	1.00	32.89
50	ATOM	3309	OD2	ASP	484	47.692	30.358	34.590	1.00	35.68
	ATOM	3310	C	ASP	484	45.159	33.900	32.469	1.00	19.15
	ATOM	3311	O	ASP	484	44.016	34.205	32.801	1.00	19.40
	ATOM	3312	N	LYS	485	46.074	34.797	32.106	1.00	15.90
	ATOM	3313	CA	LYS	485	45.809	36.233	32.153	1.00	15.26
55	ATOM	3314	CB	LYS	485	47.115	37.013	31.937	1.00	16.44
	ATOM	3315	CG	LYS	485	48.221	36.683	32.935	1.00	17.03
	ATOM	3316	CD	LYS	485	47.780	36.925	34.376	1.00	16.07
	ATOM	3317	CE	LYS	485	48.914	36.634	35.355	1.00	16.43
	ATOM	3318	NZ	LYS	485	48.526	36.873	36.774	1.00	15.12
60	ATOM	3319	C	LYS	485	44.743	36.792	31.207	1.00	15.09
	ATOM	3320	O	LYS	485	43.963	37.655	31.608	1.00	14.86

	ATOM	3321	ILE	486	44.720	36.338	29.500	1.00	12.89
	ATOM	3322	CA ILE	486	43.738	36.845	28.997	1.00	12.96
	ATOM	3323	CB ILE	486	44.206	36.634	27.534	1.00	12.31
	ATOM	3324	CG2 ILE	486	43.111	37.083	26.564	1.00	11.47
5	ATOM	3325	CG1 ILE	486	45.492	37.431	27.269	1.00	14.69
	ATOM	3326	CD1 ILE	486	45.378	38.921	27.561	1.00	14.14
	ATOM	3327	C ILE	486	42.370	36.185	29.177	1.00	13.40
	ATOM	3328	O ILE	486	41.339	36.856	29.155	1.00	13.09
	ATOM	3329	N ALA	487	42.363	34.868	29.343	1.00	13.68
10	ATOM	3330	CA ALA	487	41.108	34.143	29.523	1.00	13.77
	ATOM	3331	CB ALA	487	41.381	32.640	29.672	1.00	13.45
	ATOM	3332	C ALA	487	40.356	34.655	30.746	1.00	12.99
	ATOM	3333	O ALA	487	39.130	34.653	30.773	1.00	14.04
	ATOM	3334	N PHE	488	41.095	35.111	31.750	1.00	11.52
15	ATOM	3335	CA PHE	488	40.488	35.595	32.984	1.00	12.47
	ATOM	3336	CB PHE	488	41.548	35.663	34.079	1.00	10.72
	ATOM	3337	CG PHE	488	41.002	35.979	35.445	1.00	13.51
	ATOM	3338	CD1 PHE	488	40.295	35.019	36.172	1.00	11.90
	ATOM	3339	CD2 PHE	488	41.245	37.216	36.031	1.00	12.70
20	ATOM	3340	CE1 PHE	488	39.850	35.286	37.467	1.00	12.84
	ATOM	3341	CE2 PHE	488	40.803	37.492	37.324	1.00	12.47
	ATOM	3342	CZ PHE	488	40.106	36.524	38.043	1.00	11.48
	ATOM	3343	C PHE	488	39.806	36.957	32.858	1.00	12.87
	ATOM	3344	O PHE	488	38.944	37.290	33.669	1.00	14.49
25	ATOM	3345	N ILE	489	40.190	37.738	31.851	1.00	13.59
	ATOM	3346	CA ILE	489	39.616	39.064	31.661	1.00	12.89
	ATOM	3347	CB ILE	489	40.200	39.758	30.404	1.00	14.05
	ATOM	3348	CG2 ILE	489	39.399	41.024	30.076	1.00	11.51
	ATOM	3349	CG1 ILE	489	41.677	40.100	30.636	1.00	15.42
30	ATOM	3350	CD1 ILE	489	41.931	41.022	31.840	1.00	16.62
	ATOM	3351	C ILE	489	38.083	39.080	31.581	1.00	14.01
	ATOM	3352	O ILE	489	37.433	39.771	32.361	1.00	13.07
	ATOM	3353	N PRO	490	37.486	38.340	30.630	1.00	11.60
	ATOM	3354	CD PRO	490	38.036	37.616	29.470	1.00	12.38
35	ATOM	3355	CA PRO	490	36.022	38.377	30.580	1.00	12.27
	ATOM	3356	CB PRO	490	35.694	37.643	29.276	1.00	12.12
	ATOM	3357	CG PRO	490	36.876	36.749	29.062	1.00	14.13
	ATOM	3358	C PRO	490	35.339	37.767	31.802	1.00	11.71
	ATOM	3359	O PRO	490	34.267	38.218	32.202	1.00	11.51
40	ATOM	3360	N PHE	491	35.950	36.747	32.401	1.00	10.88
	ATOM	3361	CA PHE	491	35.346	36.126	33.581	1.00	10.74
	ATOM	3362	CB PHE	491	36.113	34.871	34.017	1.00	9.32
	ATOM	3363	CG PHE	491	35.556	34.230	35.269	1.00	9.41
	ATOM	3364	CD1 PHE	491	34.443	33.396	35.206	1.00	10.06
45	ATOM	3365	CD2 PHE	491	36.121	34.492	36.511	1.00	9.76
	ATOM	3366	CE1 PHE	491	33.901	32.834	36.365	1.00	12.14
	ATOM	3367	CE2 PHE	491	35.589	33.937	37.679	1.00	11.37
	ATOM	3368	CZ PHE	491	34.476	33.104	37.606	1.00	11.49
	ATOM	3369	C PHE	491	35.337	37.110	34.745	1.00	10.49
50	ATOM	3370	O PHE	491	34.308	37.310	35.390	1.00	11.46
	ATOM	3371	N SER	492	36.482	37.732	35.005	1.00	10.88
	ATOM	3372	CA SER	492	36.584	38.673	36.117	1.00	12.32
	ATOM	3373	CB SER	492	38.031	39.125	36.308	1.00	11.29
	ATOM	3374	OG SER	492	38.510	39.836	35.181	1.00	11.99
55	ATOM	3375	C SER	492	35.679	39.888	35.940	1.00	13.79
	ATOM	3376	O SER	492	35.297	40.533	36.919	1.00	15.69
	ATOM	3377	N TYR	493	35.340	40.190	34.693	1.00	12.01
	ATOM	3378	CA TYR	493	34.468	41.320	34.374	1.00	12.81
	ATOM	3379	CB TYR	493	34.633	41.700	32.897	1.00	14.65
60	ATOM	3380	CG TYR	493	33.937	42.983	32.493	1.00	16.68
	ATOM	3381	CD1 TYR	493	34.362	44.214	32.989	1.00	18.71

	ATOM	3383	CE1	TYR	493	33.724	45.398	31.617	1.00	20.68
	ATOM	3383	CD2	TYR	493	32.852	42.966	31.617	1.00	17.79
	ATOM	3384	CE2	TYR	493	32.207	44.147	31.245	1.00	20.59
	ATOM	3385	CZ	TYR	493	32.649	45.357	31.753	1.00	19.58
5	ATOM	3386	OH	TYR	493	32.014	46.526	31.400	1.00	18.46
	ATOM	3387	C	TYR	493	33.010	40.948	34.621	1.00	13.40
	ATOM	3388	O	TYR	493	32.227	41.727	35.162	1.00	13.85
	ATOM	3389	N	LEU	494	32.666	39.733	34.217	1.00	12.33
	ATOM	3390	CA	LEU	494	31.313	39.197	34.311	1.00	13.77
10	ATOM	3391	CB	LEU	494	31.293	37.864	33.551	1.00	16.44
	ATOM	3392	CG	LEU	494	30.246	36.756	33.614	1.00	23.07
	ATOM	3393	CD1	LEU	494	30.665	35.692	32.600	1.00	23.72
	ATOM	3394	CD2	LEU	494	30.142	36.150	34.994	1.00	18.70
	ATOM	3395	C	LEU	494	30.713	39.016	35.704	1.00	11.84
15	ATOM	3396	O	LEU	494	29.542	39.330	35.925	1.00	13.02
	ATOM	3397	N	VAL	495	31.505	38.516	36.643	1.00	10.62
	ATOM	3398	CA	VAL	495	30.990	38.236	37.979	1.00	11.98
	ATOM	3399	CB	VAL	495	32.112	37.768	38.922	1.00	11.36
	ATOM	3400	CG1	VAL	495	31.552	37.498	40.309	1.00	9.21
20	ATOM	3401	CG2	VAL	495	32.751	36.504	38.362	1.00	13.56
	ATOM	3402	C	VAL	495	30.207	39.360	38.642	1.00	12.05
	ATOM	3403	O	VAL	495	29.064	39.150	39.050	1.00	8.92
	ATOM	3404	N	ASP	496	30.802	40.543	38.760	1.00	11.08
	ATOM	3405	CA	ASP	496	30.086	41.641	39.391	1.00	11.99
25	ATOM	3406	CB	ASP	496	31.056	42.624	40.061	1.00	11.20
	ATOM	3407	CG	ASP	496	31.579	42.096	41.400	1.00	12.07
	ATOM	3408	OD1	ASP	496	31.048	41.069	41.881	1.00	13.72
	ATOM	3409	OD2	ASP	496	32.507	42.695	41.980	1.00	10.70
	ATOM	3410	C	ASP	496	29.120	42.358	38.453	1.00	13.14
30	ATOM	3411	O	ASP	496	28.297	43.151	38.906	1.00	12.97
	ATOM	3412	N	GLN	497	29.207	42.096	37.151	1.00	12.75
	ATOM	3413	CA	GLN	497	28.234	42.711	36.255	1.00	12.19
	ATOM	3414	CB	GLN	497	28.561	42.447	34.781	1.00	14.86
	ATOM	3415	CG	GLN	497	29.789	43.181	34.232	1.00	15.25
35	ATOM	3416	CD	GLN	497	29.717	44.698	34.383	1.00	19.00
	ATOM	3417	OE1	GLN	497	28.641	45.290	34.356	1.00	17.62
	ATOM	3418	NE2	GLN	497	30.875	45.330	34.526	1.00	19.82
	ATOM	3419	C	GLN	497	26.926	42.008	36.633	1.00	14.20
	ATOM	3420	O	GLN	497	25.857	42.615	36.640	1.00	12.70
40	ATOM	3421	N	TRP	498	27.033	40.720	36.964	1.00	12.15
	ATOM	3422	CA	TRP	498	25.876	39.927	37.371	1.00	13.21
	ATOM	3423	CB	TRP	498	26.230	38.435	37.414	1.00	12.05
	ATOM	3424	CG	TRP	498	25.081	37.551	37.820	1.00	12.38
	ATOM	3425	CD2	TRP	498	24.828	37.025	39.124	1.00	11.96
45	ATOM	3426	CE2	TRP	498	23.647	36.251	39.043	1.00	14.37
	ATOM	3427	CE3	TRP	498	25.487	37.129	40.357	1.00	12.53
	ATOM	3428	CD1	TRP	498	24.068	37.091	37.018	1.00	13.82
	ATOM	3429	NE1	TRP	498	23.204	36.309	37.747	1.00	13.23
	ATOM	3430	CZ2	TRP	498	23.111	35.584	40.150	1.00	12.76
50	ATOM	3431	CZ3	TRP	498	24.953	36.463	41.458	1.00	14.42
	ATOM	3432	CH2	TRP	498	23.777	35.702	41.345	1.00	12.98
	ATOM	3433	C	TRP	498	25.388	40.363	38.757	1.00	12.74
	ATOM	3434	O	TRP	498	24.202	40.609	38.945	1.00	12.76
	ATOM	3435	N	ARG	499	26.297	40.458	39.726	1.00	14.02
55	ATOM	3436	CA	ARG	499	25.907	40.862	41.080	1.00	14.05
	ATOM	3437	CB	ARG	499	27.069	40.693	42.066	1.00	13.99
	ATOM	3438	CG	ARG	499	27.111	39.317	42.732	1.00	15.24
	ATOM	3439	CD	ARG	499	28.018	39.283	43.967	1.00	14.11
	ATOM	3440	NE	ARG	499	29.427	39.442	43.618	1.00	12.25
60	ATOM	3441	CZ	ARG	499	30.435	38.959	44.333	1.00	14.41
	ATOM	3442	NH1	ARG	499	30.195	38.280	45.453	1.00	13.25

	ATOM	3443	ARG	499	31.686	39.137	43.951	1.00	12.95
	ATOM	3444	C	499	25.362	42.289	41.177	1.00	15.06
	ATOM	3445	O	499	24.423	42.539	41.936	1.00	13.96
	ATOM	3446	N	500	25.942	43.223	40.427	1.00	12.32
5	ATOM	3447	CA	500	25.454	44.600	40.469	1.00	14.74
	ATOM	3448	CB	500	26.277	45.529	39.561	1.00	11.23
	ATOM	3449	CG	500	27.692	45.753	39.989	1.00	12.02
	ATOM	3450	CD2	500	28.757	46.277	39.181	1.00	11.01
	ATOM	3451	CE2	500	29.916	46.302	39.984	1.00	10.87
10	ATOM	3452	CE3	500	28.841	46.728	37.855	1.00	13.39
	ATOM	3453	CD1	500	28.233	45.495	41.214	1.00	10.03
	ATOM	3454	NE1	500	29.567	45.819	41.218	1.00	10.74
	ATOM	3455	CZ2	500	31.153	46.759	39.508	1.00	8.74
	ATOM	3456	CZ3	500	30.073	47.186	37.378	1.00	11.68
15	ATOM	3457	CH2	500	31.210	47.195	38.205	1.00	11.27
	ATOM	3458	C	500	23.997	44.651	40.015	1.00	15.43
	ATOM	3459	O	500	23.213	45.457	40.513	1.00	14.95
	ATOM	3460	N	501	23.643	43.799	39.056	1.00	15.05
	ATOM	3461	CA	501	22.275	43.769	38.551	1.00	15.13
20	ATOM	3462	CB	501	22.249	43.170	37.142	1.00	17.81
	ATOM	3463	CG	501	22.833	44.107	36.088	1.00	22.48
	ATOM	3464	CD	501	22.988	43.403	34.751	1.00	29.90
	ATOM	3465	NE	501	21.713	42.901	34.245	1.00	35.03
	ATOM	3466	CZ	501	21.596	41.864	33.422	1.00	37.06
25	ATOM	3467	NH1	501	22.678	41.213	33.012	1.00	37.13
	ATOM	3468	NH2	501	20.397	41.481	33.004	1.00	36.72
	ATOM	3469	C	501	21.346	43.006	39.493	1.00	15.12
	ATOM	3470	O	501	20.129	43.222	39.497	1.00	13.20
	ATOM	3471	N	502	21.917	42.102	40.284	1.00	13.23
30	ATOM	3472	CA	502	21.126	41.367	41.262	1.00	14.21
	ATOM	3473	CB	502	21.910	40.175	41.854	1.00	10.98
	ATOM	3474	CG1	502	21.207	39.660	43.102	1.00	11.32
	ATOM	3475	CG2	502	22.003	39.052	40.816	1.00	14.99
	ATOM	3476	C	502	20.820	42.369	42.373	1.00	14.19
35	ATOM	3477	O	502	19.678	42.513	42.813	1.00	14.12
	ATOM	3478	N	503	21.862	43.072	42.802	1.00	14.50
	ATOM	3479	CA	503	21.749	44.070	43.856	1.00	15.39
	ATOM	3480	CB	503	23.139	44.614	44.197	1.00	14.83
	ATOM	3481	CG	503	23.999	43.647	44.971	1.00	14.46
40	ATOM	3482	CD1	503	25.383	43.722	44.901	1.00	14.93
	ATOM	3483	CD2	503	23.422	42.677	45.793	1.00	16.22
	ATOM	3484	CE1	503	26.186	42.848	45.640	1.00	14.36
	ATOM	3485	CE2	503	24.218	41.797	46.537	1.00	12.05
	ATOM	3486	CZ	503	25.598	41.886	46.459	1.00	15.10
45	ATOM	3487	C	503	20.802	45.221	43.509	1.00	15.02
	ATOM	3488	O	503	20.022	45.650	44.359	1.00	14.79
	ATOM	3489	N	504	20.853	45.722	42.274	1.00	14.97
	ATOM	3490	CA	504	19.963	46.820	41.916	1.00	15.11
	ATOM	3491	CB	504	20.575	47.716	40.819	1.00	15.57
50	ATOM	3492	CG	504	20.520	47.100	39.426	1.00	16.33
	ATOM	3493	OD1	504	19.860	46.057	39.220	1.00	17.34
	ATOM	3494	OD2	504	21.144	47.689	38.522	1.00	17.52
	ATOM	3495	C	504	18.565	46.356	41.516	1.00	16.58
	ATOM	3496	O	504	17.756	47.153	41.044	1.00	17.20
55	ATOM	3497	N	505	18.287	45.067	41.708	1.00	16.74
	ATOM	3498	CA	505	16.971	44.527	41.400	1.00	17.30
	ATOM	3499	C	505	16.636	44.167	39.961	1.00	17.93
	ATOM	3500	O	505	15.520	43.732	39.693	1.00	18.99
	ATOM	3501	N	506	17.578	44.341	39.039	1.00	17.16
60	ATOM	3502	CA	506	17.350	44.013	37.630	1.00	18.82
	ATOM	3503	CB	506	18.514	44.514	36.771	1.00	19.99

	ATOM	3505	OG	SER	506	18.605	45.920	37.405	1.00	25.35
	ATOM	3505	C	SER	506	17.185	42.509	37.401	1.00	18.71
	ATOM	3506	O	SER	506	16.500	42.089	36.470	1.00	19.68
	ATOM	3507	N	ILE	507	17.837	41.709	38.241	1.00	17.20
5	ATOM	3508	CA	ILE	507	17.767	40.253	38.147	1.00	17.19
	ATOM	3509	CB	ILE	507	19.184	39.630	38.004	1.00	16.86
	ATOM	3510	CG2	ILE	507	19.076	38.112	37.912	1.00	15.71
	ATOM	3511	CG1	ILE	507	19.890	40.193	36.767	1.00	17.34
	ATOM	3512	CD1	ILE	507	21.357	39.746	36.640	1.00	15.06
10	ATOM	3513	C	ILE	507	17.123	39.695	39.420	1.00	17.07
	ATOM	3514	O	ILE	507	17.689	39.807	40.509	1.00	16.98
	ATOM	3515	N	THR	508	15.940	39.105	39.281	1.00	17.01
	ATOM	3516	CA	THR	508	15.227	38.531	40.421	1.00	18.33
	ATOM	3517	CB	THR	508	13.710	38.551	40.196	1.00	18.44
15	ATOM	3518	OG1	THR	508	13.365	37.586	39.191	1.00	20.70
	ATOM	3519	CG2	THR	508	13.263	39.931	39.734	1.00	20.95
	ATOM	3520	C	THR	508	15.671	37.088	40.581	1.00	18.12
	ATOM	3521	O	THR	508	16.318	36.540	39.689	1.00	17.12
	ATOM	3522	N	LYS	509	15.312	36.469	41.703	1.00	20.57
20	ATOM	3523	CA	LYS	509	15.702	35.087	41.961	1.00	23.09
	ATOM	3524	CB	LYS	509	15.240	34.637	43.352	1.00	24.96
	ATOM	3525	CG	LYS	509	13.763	34.281	43.465	1.00	29.41
	ATOM	3526	CD	LYS	509	13.455	33.746	44.859	1.00	32.03
	ATOM	3527	CE	LYS	509	12.017	33.278	44.988	1.00	33.33
25	ATOM	3528	NZ	LYS	509	11.724	32.824	46.378	1.00	34.91
	ATOM	3529	C	LYS	509	15.142	34.148	40.909	1.00	24.36
	ATOM	3530	O	LYS	509	15.601	33.018	40.769	1.00	25.76
	ATOM	3531	N	GLU	510	14.146	34.619	40.169	1.00	25.33
	ATOM	3532	CA	GLU	510	13.534	33.819	39.116	1.00	26.94
30	ATOM	3533	CB	GLU	510	12.240	34.481	38.649	1.00	31.14
	ATOM	3534	CG	GLU	510	11.420	35.078	39.776	1.00	39.75
	ATOM	3535	CD	GLU	510	10.187	34.265	40.094	1.00	42.36
	ATOM	3536	OE1	GLU	510	9.312	34.169	39.212	1.00	46.25
	ATOM	3537	OE2	GLU	510	10.094	33.725	41.217	1.00	45.33
35	ATOM	3538	C	GLU	510	14.489	33.726	37.927	1.00	26.01
	ATOM	3539	O	GLU	510	14.458	32.758	37.163	1.00	25.45
	ATOM	3540	N	ASN	511	15.343	34.736	37.780	1.00	22.90
	ATOM	3541	CA	ASN	511	16.271	34.785	36.657	1.00	21.40
	ATOM	3542	CB	ASN	511	15.973	36.028	35.811	1.00	23.82
40	ATOM	3543	CG	ASN	511	14.538	36.057	35.315	1.00	29.85
	ATOM	3544	OD1	ASN	511	14.086	35.126	34.646	1.00	30.15
	ATOM	3545	ND2	ASN	511	13.811	37.122	35.647	1.00	28.53
	ATOM	3546	C	ASN	511	17.759	34.747	37.000	1.00	18.64
	ATOM	3547	O	ASN	511	18.593	34.993	36.131	1.00	16.50
45	ATOM	3548	N	TYR	512	18.089	34.441	38.251	1.00	15.85
	ATOM	3549	CA	TYR	512	19.487	34.360	38.681	1.00	15.32
	ATOM	3550	CB	TYR	512	19.604	33.604	40.007	1.00	14.72
	ATOM	3551	CG	TYR	512	19.244	34.359	41.266	1.00	14.45
	ATOM	3552	CD1	TYR	512	19.008	33.667	42.450	1.00	14.67
50	ATOM	3553	CE1	TYR	512	18.736	34.335	43.637	1.00	16.30
	ATOM	3554	CD2	TYR	512	19.194	35.753	41.295	1.00	14.34
	ATOM	3555	CE2	TYR	512	18.920	36.435	42.484	1.00	17.16
	ATOM	3556	CZ	TYR	512	18.695	35.714	43.648	1.00	18.10
	ATOM	3557	OH	TYR	512	18.451	36.361	44.837	1.00	21.96
55	ATOM	3558	C	TYR	512	20.378	33.613	37.688	1.00	16.40
	ATOM	3559	O	TYR	512	21.318	34.171	37.108	1.00	13.43
	ATOM	3560	N	ASN	513	20.077	32.328	37.521	1.00	15.11
	ATOM	3561	CA	ASN	513	20.877	31.461	36.673	1.00	14.44
	ATOM	3562	CB	ASN	513	20.478	29.999	36.894	1.00	14.83
60	ATOM	3563	CG	ASN	513	21.677	29.073	36.872	1.00	13.79
	ATOM	3564	OD1	ASN	513	22.620	29.261	37.634	1.00	15.96

	ATOM	3565	ASN	513	21.652	28.078	35.9	1.00	13.24
	ATOM	3566	C	ASN	513	20.840	31.778	35.198	1.00 14.91
	ATOM	3567	O	ASN	513	21.865	31.701	34.517	1.00 12.27
	ATOM	3568	N	GLN	514	19.664	32.133	34.697	1.00 13.28
5	ATOM	3569	CA	GLN	514	19.539	32.441	33.285	1.00 16.41
	ATOM	3570	CB	GLN	514	18.062	32.642	32.924	1.00 18.43
	ATOM	3571	CG	GLN	514	17.219	31.363	33.087	1.00 25.86
	ATOM	3572	CD	GLN	514	16.628	31.163	34.492	1.00 27.97
	ATOM	3573	OE1	GLN	514	17.184	31.606	35.501	1.00 22.77
10	ATOM	3574	NE2	GLN	514	15.493	30.468	34.551	1.00 32.36
	ATOM	3575	C	GLN	514	20.378	33.660	32.900	1.00 16.35
	ATOM	3576	O	GLN	514	21.004	33.682	31.830	1.00 14.47
	ATOM	3577	N	GLU	515	20.406	34.668	33.769	1.00 14.45
	ATOM	3578	CA	GLU	515	21.188	35.872	33.486	1.00 15.60
15	ATOM	3579	CB	GLU	515	20.762	37.023	34.398	1.00 17.63
	ATOM	3580	CG	GLU	515	19.361	37.553	34.107	1.00 23.50
	ATOM	3581	CD	GLU	515	19.200	37.998	32.663	1.00 29.39
	ATOM	3582	OE1	GLU	515	20.051	38.776	32.177	1.00 29.30
	ATOM	3583	OE2	GLU	515	18.220	37.570	32.016	1.00 31.22
20	ATOM	3584	C	GLU	515	22.680	35.591	33.656	1.00 13.08
	ATOM	3585	O	GLU	515	23.512	36.209	32.992	1.00 14.72
	ATOM	3586	N	TRP	516	23.018	34.671	34.555	1.00 11.64
	ATOM	3587	CA	TRP	516	24.423	34.303	34.752	1.00 12.26
	ATOM	3588	CB	TRP	516	24.559	33.298	35.901	1.00 10.60
25	ATOM	3589	CG	TRP	516	25.924	32.648	36.038	1.00 13.26
	ATOM	3590	CD2	TRP	516	27.086	33.201	36.671	1.00 13.09
	ATOM	3591	CE2	TRP	516	28.110	32.228	36.593	1.00 14.57
	ATOM	3592	CE3	TRP	516	27.362	34.423	37.300	1.00 14.40
	ATOM	3593	CD1	TRP	516	26.281	31.402	35.612	1.00 15.30
30	ATOM	3594	NE1	TRP	516	27.593	31.140	35.943	1.00 14.97
	ATOM	3595	CZ2	TRP	516	29.392	32.438	37.119	1.00 14.78
	ATOM	3596	CZ3	TRP	516	28.640	34.632	37.827	1.00 15.38
	ATOM	3597	CH2	TRP	516	29.636	33.642	37.731	1.00 16.29
	ATOM	3598	C	TRP	516	24.945	33.701	33.450	1.00 12.53
35	ATOM	3599	O	TRP	516	26.014	34.081	32.967	1.00 15.24
	ATOM	3600	N	TRP	517	24.186	32.778	32.864	1.00 11.64
	ATOM	3601	CA	TRP	517	24.631	32.169	31.618	1.00 12.88
	ATOM	3602	CB	TRP	517	23.892	30.850	31.371	1.00 11.74
	ATOM	3603	CG	TRP	517	24.494	29.780	32.238	1.00 11.07
40	ATOM	3604	CD2	TRP	517	25.768	29.150	32.047	1.00 10.34
	ATOM	3605	CE2	TRP	517	26.014	28.349	33.182	1.00 11.07
	ATOM	3606	CE3	TRP	517	26.730	29.193	31.028	1.00 13.21
	ATOM	3607	CD1	TRP	517	24.028	29.338	33.442	1.00 10.52
	ATOM	3608	NE1	TRP	517	24.937	28.480	34.019	1.00 12.71
45	ATOM	3609	CZ2	TRP	517	27.185	27.596	33.328	1.00 11.38
	ATOM	3610	CZ3	TRP	517	27.899	28.441	31.174	1.00 13.92
	ATOM	3611	CH2	TRP	517	28.112	27.657	32.315	1.00 11.19
	ATOM	3612	C	TRP	517	24.571	33.092	30.402	1.00 13.68
	ATOM	3613	O	TRP	517	25.360	32.937	29.473	1.00 13.23
50	ATOM	3614	N	SER	518	23.662	34.063	30.403	1.00 13.61
	ATOM	3615	CA	SER	518	23.606	35.001	29.289	1.00 13.77
	ATOM	3616	CB	SER	518	22.406	35.938	29.429	1.00 16.27
	ATOM	3617	OG	SER	518	21.198	35.215	29.273	1.00 25.55
	ATOM	3618	C	SER	518	24.908	35.812	29.306	1.00 13.80
55	ATOM	3619	O	SER	518	25.438	36.174	28.261	1.00 11.73
	ATOM	3620	N	LEU	519	25.420	36.085	30.503	1.00 12.48
	ATOM	3621	CA	LEU	519	26.664	36.835	30.642	1.00 13.86
	ATOM	3622	CB	LEU	519	26.792	37.386	32.065	1.00 13.18
	ATOM	3623	CG	LEU	519	25.820	38.521	32.408	1.00 17.32
60	ATOM	3624	CD1	LEU	519	25.996	38.936	33.869	1.00 15.81
	ATOM	3625	CD2	LEU	519	26.082	39.706	31.497	1.00 18.32

	ATOM	3627	C	LEU	519	27.854	35.936	31.5	1.00	14.53
	ATOM	3628	O	LEU	519	28.833	36.374	29.701	1.00	13.21
	ATOM	3629	N	ARG	520	27.763	34.680	30.740	1.00	12.53
	ATOM	3630	CA	ARG	520	28.811	33.698	30.483	1.00	14.43
5	ATOM	3631	CB	ARG	520	28.415	32.342	31.080	1.00	12.24
	ATOM	3632	CG	ARG	520	28.505	32.295	32.602	1.00	10.71
	ATOM	3633	CD	ARG	520	29.933	32.016	33.047	1.00	11.25
	ATOM	3634	NE	ARG	520	30.126	30.601	33.360	1.00	11.37
	ATOM	3635	CZ	ARG	520	31.309	30.021	33.547	1.00	14.25
10	ATOM	3636	NH1	ARG	520	31.364	28.728	33.843	1.00	11.46
	ATOM	3637	NH2	ARG	520	32.435	30.722	33.418	1.00	8.82
	ATOM	3638	C	ARG	520	29.018	33.581	28.975	1.00	15.32
	ATOM	3639	O	ARG	520	30.154	33.479	28.499	1.00	14.29
	ATOM	3640	N	LEU	521	27.914	33.602	28.232	1.00	14.48
15	ATOM	3641	CA	LEU	521	27.964	33.534	26.775	1.00	15.03
	ATOM	3642	CB	LEU	521	26.570	33.237	26.197	1.00	14.34
	ATOM	3643	CG	LEU	521	26.464	33.320	24.663	1.00	17.99
	ATOM	3644	CD1	LEU	521	27.277	32.193	24.036	1.00	14.70
	ATOM	3645	CD2	LEU	521	25.003	33.225	24.221	1.00	19.69
20	ATOM	3646	C	LEU	521	28.463	34.862	26.195	1.00	15.14
	ATOM	3647	O	LEU	521	29.426	34.901	25.433	1.00	16.02
	ATOM	3648	N	LYS	522	27.800	35.952	26.564	1.00	15.84
	ATOM	3649	CA	LYS	522	28.156	37.273	26.053	1.00	16.80
	ATOM	3650	CB	LYS	522	27.257	38.340	26.691	1.00	20.30
25	ATOM	3651	CG	LYS	522	27.614	39.767	26.290	1.00	25.17
	ATOM	3652	CD	LYS	522	26.641	40.777	26.885	1.00	25.79
	ATOM	3653	CE	LYS	522	27.035	42.197	26.505	1.00	27.00
	ATOM	3654	NZ	LYS	522	26.061	43.202	27.014	1.00	29.07
	ATOM	3655	C	LYS	522	29.618	37.664	26.245	1.00	15.29
30	ATOM	3656	O	LYS	522	30.254	38.159	25.322	1.00	15.94
	ATOM	3657	N	TYR	523	30.159	37.446	27.437	1.00	14.11
	ATOM	3658	CA	TYR	523	31.545	37.823	27.689	1.00	14.39
	ATOM	3659	CB	TYR	523	31.672	38.370	29.115	1.00	16.01
	ATOM	3660	CG	TYR	523	30.969	39.699	29.274	1.00	19.66
35	ATOM	3661	CD1	TYR	523	29.842	39.833	30.085	1.00	22.54
	ATOM	3662	CE1	TYR	523	29.159	41.054	30.173	1.00	24.34
	ATOM	3663	CD2	TYR	523	31.400	40.816	28.560	1.00	21.80
	ATOM	3664	CE2	TYR	523	30.730	42.029	28.641	1.00	24.56
	ATOM	3665	CZ	TYR	523	29.611	42.142	29.444	1.00	24.26
40	ATOM	3666	OH	TYR	523	28.946	43.346	29.493	1.00	30.82
	ATOM	3667	C	TYR	523	32.605	36.752	27.437	1.00	14.99
	ATOM	3668	O	TYR	523	33.610	37.023	26.781	1.00	12.52
	ATOM	3669	N	GLN	524	32.389	35.537	27.935	1.00	13.32
	ATOM	3670	CA	GLN	524	33.382	34.470	27.751	1.00	12.95
45	ATOM	3671	CB	GLN	524	33.425	33.566	28.980	1.00	11.02
	ATOM	3672	CG	GLN	524	33.970	34.205	30.230	1.00	12.37
	ATOM	3673	CD	GLN	524	34.033	33.207	31.356	1.00	10.81
	ATOM	3674	OE1	GLN	524	33.043	32.974	32.049	1.00	12.38
	ATOM	3675	NE2	GLN	524	35.191	32.577	31.520	1.00	10.48
50	ATOM	3676	C	GLN	524	33.162	33.584	26.534	1.00	11.74
	ATOM	3677	O	GLN	524	34.059	32.845	26.137	1.00	12.11
	ATOM	3678	N	GLY	525	31.973	33.637	25.949	1.00	12.72
	ATOM	3679	CA	GLY	525	31.709	32.785	24.804	1.00	13.19
	ATOM	3680	C	GLY	525	31.674	31.328	25.237	1.00	13.82
55	ATOM	3681	O	GLY	525	32.180	30.444	24.540	1.00	12.99
	ATOM	3682	N	LEU	526	31.087	31.074	26.403	1.00	12.01
	ATOM	3683	CA	LEU	526	30.975	29.710	26.913	1.00	11.37
	ATOM	3684	CB	LEU	526	31.581	29.598	28.317	1.00	11.79
	ATOM	3685	CG	LEU	526	33.052	29.983	28.498	1.00	11.39
60	ATOM	3686	CD1	LEU	526	33.439	29.852	29.978	1.00	12.76
	ATOM	3687	CD2	LEU	526	33.926	29.084	27.625	1.00	9.67

	ATOM	3687		LEU	526	29.515	29.289	26.9	1.00	14.13
	ATOM	3688		LEU	526	28.617	30.134	27.039	1.00	14.75
	ATOM	3689	N	CYS	527	29.284	27.978	26.963	1.00	13.45
	ATOM	3690	CA	CYS	527	27.939	27.429	27.078	1.00	15.05
5	ATOM	3691	CB	CYS	527	27.424	26.919	25.722	1.00	15.05
	ATOM	3692	SG	CYS	527	28.474	25.702	24.876	1.00	19.74
	ATOM	3693	C	CYS	527	27.978	26.287	28.091	1.00	15.94
	ATOM	3694	O	CYS	527	29.019	25.653	28.289	1.00	15.05
	ATOM	3695	N	PRO	528	26.854	26.034	28.773	1.00	15.16
10	ATOM	3696	CD	PRO	528	25.587	26.794	28.757	1.00	16.64
	ATOM	3697	CA	PRO	528	26.816	24.952	29.761	1.00	15.93
	ATOM	3698	CB	PRO	528	25.579	25.291	30.588	1.00	15.52
	ATOM	3699	CG	PRO	528	24.653	25.904	29.560	1.00	17.39
	ATOM	3700	C	PRO	528	26.706	23.606	29.040	1.00	16.28
15	ATOM	3701	O	PRO	528	25.832	23.426	28.195	1.00	16.69
	ATOM	3702	N	PRO	529	27.602	22.650	29.359	1.00	15.89
	ATOM	3703	CD	PRO	529	28.620	22.713	30.423	1.00	17.16
	ATOM	3704	CA	PRO	529	27.595	21.325	28.728	1.00	16.53
	ATOM	3705	CB	PRO	529	28.813	20.646	29.347	1.00	16.86
20	ATOM	3706	CG	PRO	529	28.864	21.250	30.719	1.00	17.60
	ATOM	3707	C	PRO	529	26.299	20.564	28.979	1.00	16.93
	ATOM	3708	O	PRO	529	25.929	19.675	28.214	1.00	19.21
	ATOM	3709	N	VAL	530	25.620	20.919	30.064	1.00	15.31
	ATOM	3710	CA	VAL	530	24.345	20.309	30.421	1.00	18.95
25	ATOM	3711	CB	VAL	530	24.447	19.514	31.747	1.00	18.21
	ATOM	3712	CG1	VAL	530	23.057	19.197	32.277	1.00	20.68
	ATOM	3713	CG2	VAL	530	25.221	18.216	31.516	1.00	20.27
	ATOM	3714	C	VAL	530	23.331	21.439	30.591	1.00	18.93
	ATOM	3715	O	VAL	530	23.586	22.402	31.320	1.00	17.96
30	ATOM	3716	N	PRO	531	22.179	21.351	29.908	1.00	19.85
	ATOM	3717	CD	PRO	531	21.701	20.311	28.982	1.00	21.08
	ATOM	3718	CA	PRO	531	21.186	22.422	30.055	1.00	20.04
	ATOM	3719	CB	PRO	531	20.019	21.940	29.186	1.00	23.88
	ATOM	3720	CG	PRO	531	20.207	20.436	29.134	1.00	24.49
35	ATOM	3721	C	PRO	531	20.806	22.624	31.519	1.00	20.47
	ATOM	3722	O	PRO	531	20.590	21.660	32.258	1.00	19.22
	ATOM	3723	N	ARG	532	20.748	23.880	31.946	1.00	17.94
	ATOM	3724	CA	ARG	532	20.408	24.173	33.331	1.00	19.58
	ATOM	3725	CB	ARG	532	20.850	25.597	33.698	1.00	17.12
40	ATOM	3726	CG	ARG	532	22.203	26.006	33.109	1.00	17.15
	ATOM	3727	CD	ARG	532	23.261	24.916	33.259	1.00	14.33
	ATOM	3728	NE	ARG	532	23.625	24.670	34.650	1.00	16.72
	ATOM	3729	CZ	ARG	532	23.756	23.457	35.175	1.00	18.54
	ATOM	3730	NH1	ARG	532	23.548	22.382	34.418	1.00	18.00
45	ATOM	3731	NH2	ARG	532	24.100	23.316	36.447	1.00	16.39
	ATOM	3732	C	ARG	532	18.903	24.018	33.538	1.00	20.97
	ATOM	3733	O	ARG	532	18.125	24.148	32.593	1.00	21.91
	ATOM	3734	N	THR	533	18.502	23.735	34.773	1.00	21.56
	ATOM	3735	CA	THR	533	17.089	23.560	35.099	1.00	23.91
50	ATOM	3736	CB	THR	533	16.743	22.075	35.337	1.00	24.39
	ATOM	3737	OG1	THR	533	17.593	21.542	36.363	1.00	26.32
	ATOM	3738	CG2	THR	533	16.930	21.273	34.054	1.00	26.00
	ATOM	3739	C	THR	533	16.734	24.342	36.354	1.00	24.49
	ATOM	3740	O	THR	533	17.622	24.792	37.088	1.00	22.75
55	ATOM	3741	N	GLN	534	15.436	24.494	36.601	1.00	25.56
	ATOM	3742	CA	GLN	534	14.963	25.227	37.769	1.00	27.46
	ATOM	3743	CB	GLN	534	13.429	25.173	37.845	1.00	29.98
	ATOM	3744	CG	GLN	534	12.834	26.077	38.917	1.00	34.85
	ATOM	3745	CD	GLN	534	12.498	25.332	40.196	1.00	38.40
60	ATOM	3746	OE1	GLN	534	13.144	24.341	40.542	1.00	39.55
	ATOM	3747	NE2	GLN	534	11.487	25.815	40.914	1.00	40.66

	ATOM	3748	C	GLN	534	15.589	24.628	39.023	1.00	26.85
	ATOM	3749	O	GLN	534	15.630	23.410	39.195	1.00	28.91
	ATOM	3750	N	GLY	535	16.088	25.486	39.900	1.00	26.04
	ATOM	3751	CA	GLY	535	16.722	24.988	41.103	1.00	22.99
5	ATOM	3752	C	GLY	535	18.230	25.145	41.032	1.00	20.56
	ATOM	3753	O	GLY	535	18.893	25.172	42.062	1.00	21.12
	ATOM	3754	N	ASP	536	18.783	25.236	39.824	1.00	19.34
	ATOM	3755	CA	ASP	536	20.229	25.412	39.690	1.00	18.42
	ATOM	3756	CB	ASP	536	20.710	25.126	38.262	1.00	18.23
10	ATOM	3757	CG	ASP	536	20.693	23.647	37.917	1.00	17.73
	ATOM	3758	OD1	ASP	536	20.885	22.814	38.829	1.00	16.38
	ATOM	3759	OD2	ASP	536	20.509	23.326	36.726	1.00	18.51
	ATOM	3760	C	ASP	536	20.617	26.845	40.039	1.00	17.25
	ATOM	3761	O	ASP	536	19.893	27.786	39.722	1.00	17.90
15	ATOM	3762	N	PHE	537	21.761	26.996	40.694	1.00	15.41
	ATOM	3763	CA	PHE	537	22.285	28.309	41.069	1.00	15.10
	ATOM	3764	CB	PHE	537	21.914	28.654	42.511	1.00	13.69
	ATOM	3765	CG	PHE	537	22.344	30.031	42.934	1.00	14.67
	ATOM	3766	CD1	PHE	537	21.970	31.150	42.190	1.00	14.51
20	ATOM	3767	CD2	PHE	537	23.127	30.211	44.073	1.00	14.42
	ATOM	3768	CE1	PHE	537	22.372	32.434	42.576	1.00	16.76
	ATOM	3769	CE2	PHE	537	23.535	31.490	44.469	1.00	16.13
	ATOM	3770	CZ	PHE	537	23.155	32.602	43.717	1.00	16.55
	ATOM	3771	C	PHE	537	23.798	28.188	40.929	1.00	14.34
25	ATOM	3772	O	PHE	537	24.534	28.107	41.910	1.00	11.59
	ATOM	3773	N	ASP	538	24.246	28.160	39.683	1.00	13.08
	ATOM	3774	CA	ASP	538	25.656	28.013	39.380	1.00	12.91
	ATOM	3775	CB	ASP	538	25.812	27.915	37.858	1.00	14.42
	ATOM	3776	CG	ASP	538	24.984	26.761	37.275	1.00	13.98
30	ATOM	3777	OD1	ASP	538	24.869	25.725	37.959	1.00	15.77
	ATOM	3778	OD2	ASP	538	24.456	26.875	36.148	1.00	16.17
	ATOM	3779	C	ASP	538	26.546	29.093	40.005	1.00	13.57
	ATOM	3780	O	ASP	538	27.680	28.814	40.391	1.00	14.25
	ATOM	3781	N	PRO	539	26.049	30.336	40.125	1.00	12.45
35	ATOM	3782	CD	PRO	539	24.833	30.944	39.554	1.00	12.63
	ATOM	3783	CA	PRO	539	26.903	31.362	40.738	1.00	14.07
	ATOM	3784	CB	PRO	539	25.998	32.596	40.760	1.00	13.43
	ATOM	3785	CG	PRO	539	25.203	32.428	39.495	1.00	14.83
	ATOM	3786	C	PRO	539	27.318	30.945	42.149	1.00	14.32
40	ATOM	3787	O	PRO	539	28.405	31.290	42.620	1.00	15.96
	ATOM	3788	N	GLY	540	26.443	30.201	42.818	1.00	13.56
	ATOM	3789	CA	GLY	540	26.726	29.759	44.173	1.00	13.06
	ATOM	3790	C	GLY	540	27.880	28.779	44.262	1.00	14.35
	ATOM	3791	O	GLY	540	28.410	28.530	45.350	1.00	14.78
45	ATOM	3792	N	ALA	541	28.278	28.233	43.116	1.00	13.27
	ATOM	3793	CA	ALA	541	29.374	27.268	43.057	1.00	13.82
	ATOM	3794	CB	ALA	541	29.142	26.282	41.908	1.00	13.95
	ATOM	3795	C	ALA	541	30.736	27.948	42.899	1.00	14.23
	ATOM	3796	O	ALA	541	31.755	27.277	42.723	1.00	14.48
50	ATOM	3797	N	LYS	542	30.744	29.278	42.950	1.00	13.31
	ATOM	3798	CA	LYS	542	31.981	30.051	42.845	1.00	13.43
	ATOM	3799	CB	LYS	542	31.854	31.131	41.758	1.00	11.46
	ATOM	3800	CG	LYS	542	33.080	32.052	41.629	1.00	11.83
	ATOM	3801	CD	LYS	542	34.363	31.258	41.356	1.00	11.07
55	ATOM	3802	CE	LYS	542	35.594	32.152	41.434	1.00	13.88
	ATOM	3803	NZ	LYS	542	36.866	31.380	41.387	1.00	13.39
	ATOM	3804	C	LYS	542	32.195	30.690	44.215	1.00	14.23
	ATOM	3805	O	LYS	542	31.363	31.472	44.678	1.00	13.83
	ATOM	3806	N	PHE	543	33.309	30.346	44.857	1.00	14.52
60	ATOM	3807	CA	PHE	543	33.640	30.842	46.197	1.00	15.65
	ATOM	3808	CB	PHE	543	35.156	30.803	46.422	1.00	16.34

	ATOM	3809	PHE	543	35.581	31.353	47.7	1.00	16.35
	ATOM	3810	CD1 PHE	543	35.489	30.574	48.909	1.00	18.40
	ATOM	3811	CD2 PHE	543	36.047	32.661	47.875	1.00	19.53
	ATOM	3812	CE1 PHE	543	35.858	31.090	50.161	1.00	18.32
5	ATOM	3813	CE2 PHE	543	36.418	33.188	49.120	1.00	18.19
	ATOM	3814	CZ PHE	543	36.323	32.399	50.263	1.00	18.52
	ATOM	3815	C PHE	543	33.159	32.242	46.577	1.00	16.50
	ATOM	3816	O PHE	543	32.411	32.411	47.540	1.00	17.35
	ATOM	3817	N HIS	544	33.603	33.242	45.822	1.00	13.72
10	ATOM	3818	CA HIS	544	33.284	34.635	46.119	1.00	14.78
	ATOM	3819	CB HIS	544	34.006	35.543	45.116	1.00	13.88
	ATOM	3820	CG HIS	544	35.484	35.298	45.050	1.00	13.02
	ATOM	3821	CD2 HIS	544	36.536	36.070	45.408	1.00	10.61
	ATOM	3822	ND1 HIS	544	36.017	34.106	44.606	1.00	14.71
15	ATOM	3823	CE1 HIS	544	37.335	34.155	44.693	1.00	13.70
	ATOM	3824	NE2 HIS	544	37.678	35.335	45.176	1.00	13.80
	ATOM	3825	C HIS	544	31.808	35.016	46.213	1.00	14.84
	ATOM	3826	O HIS	544	31.470	36.034	46.826	1.00	14.80
	ATOM	3827	N ILE	545	30.930	34.212	45.622	1.00	14.32
20	ATOM	3828	CA ILE	545	29.504	34.511	45.670	1.00	13.72
	ATOM	3829	CB ILE	545	28.733	33.701	44.598	1.00	14.44
	ATOM	3830	CG2 ILE	545	27.234	33.908	44.749	1.00	12.67
	ATOM	3831	CG1 ILE	545	29.190	34.138	43.199	1.00	16.16
	ATOM	3832	CD1 ILE	545	29.032	35.621	42.922	1.00	16.96
25	ATOM	3833	C ILE	545	28.954	34.249	47.079	1.00	14.60
	ATOM	3834	O ILE	545	28.518	35.182	47.757	1.00	13.03
	ATOM	3835	N PRO	546	28.976	32.986	47.549	1.00	15.66
	ATOM	3836	CD PRO	546	29.355	31.713	46.909	1.00	13.25
	ATOM	3837	CA PRO	546	28.457	32.750	48.903	1.00	15.17
30	ATOM	3838	CB PRO	546	28.453	31.222	49.014	1.00	16.53
	ATOM	3839	CG PRO	546	29.579	30.812	48.111	1.00	17.51
	ATOM	3840	C PRO	546	29.305	33.419	49.990	1.00	16.68
	ATOM	3841	O PRO	546	28.799	33.732	51.074	1.00	15.08
	ATOM	3842	N SER	547	30.589	33.641	49.701	1.00	13.81
35	ATOM	3843	CA SER	547	31.488	34.284	50.659	1.00	15.60
	ATOM	3844	CB SER	547	32.947	33.918	50.362	1.00	18.79
	ATOM	3845	OG SER	547	33.183	32.536	50.565	1.00	22.02
	ATOM	3846	C SER	547	31.342	35.803	50.646	1.00	13.58
	ATOM	3847	O SER	547	31.965	36.499	51.443	1.00	13.34
40	ATOM	3848	N SER	548	30.529	36.312	49.727	1.00	13.46
	ATOM	3849	CA SER	548	30.288	37.751	49.617	1.00	13.96
	ATOM	3850	CB SER	548	29.427	38.231	50.791	1.00	14.80
	ATOM	3851	OG SER	548	28.929	39.544	50.566	1.00	14.76
	ATOM	3852	C SER	548	31.571	38.587	49.542	1.00	15.62
45	ATOM	3853	O SER	548	31.743	39.553	50.288	1.00	15.61
	ATOM	3854	N VAL	549	32.464	38.201	48.637	1.00	14.22
	ATOM	3855	CA VAL	549	33.718	38.914	48.413	1.00	14.31
	ATOM	3856	CB VAL	549	34.936	37.957	48.426	1.00	14.24
	ATOM	3857	CG1 VAL	549	36.200	38.716	48.029	1.00	15.66
50	ATOM	3858	CG2 VAL	549	35.105	37.337	49.813	1.00	15.47
	ATOM	3859	C VAL	549	33.611	39.538	47.023	1.00	13.23
	ATOM	3860	O VAL	549	33.448	38.826	46.034	1.00	14.20
	ATOM	3861	N PRO	550	33.680	40.877	46.931	1.00	13.00
	ATOM	3862	CD PRO	550	33.789	41.840	48.040	1.00	12.51
55	ATOM	3863	CA PRO	550	33.588	41.572	45.637	1.00	13.72
	ATOM	3864	CB PRO	550	33.870	43.026	46.007	1.00	12.92
	ATOM	3865	CG PRO	550	33.282	43.120	47.399	1.00	13.93
	ATOM	3866	C PRO	550	34.597	41.006	44.640	1.00	13.40
	ATOM	3867	O PRO	550	35.694	40.602	45.027	1.00	12.68
60	ATOM	3868	N TYR	551	34.238	40.996	43.357	1.00	12.51
	ATOM	3869	CA TYR	551	35.111	40.419	42.337	1.00	11.74

	ATOM	3870	CB	TYR	551	34.343	39.339	565	1.00	12.26
	ATOM	3871	CG	TYR	551	35.216	38.181	41.146	1.00	11.10
	ATOM	3872	CD1	TYR	551	35.589	37.201	42.069	1.00	12.21
	ATOM	3873	CE1	TYR	551	36.445	36.163	41.716	1.00	11.38
5	ATOM	3874	CD2	TYR	551	35.717	38.092	39.849	1.00	10.70
	ATOM	3875	CE2	TYR	551	36.578	37.052	39.479	1.00	11.88
	ATOM	3876	CZ	TYR	551	36.936	36.095	40.422	1.00	12.73
	ATOM	3877	OH	TYR	551	37.789	35.078	40.077	1.00	12.21
	ATOM	3878	C	TYR	551	35.758	41.362	41.316	1.00	12.92
10	ATOM	3879	O	TYR	551	36.772	41.009	40.713	1.00	12.28
	ATOM	3880	N	ILE	552	35.182	42.543	41.106	1.00	10.57
	ATOM	3881	CA	ILE	552	35.729	43.474	40.123	1.00	10.70
	ATOM	3882	CB	ILE	552	34.866	44.760	40.042	1.00	10.46
	ATOM	3883	CG2	ILE	552	35.175	45.681	41.219	1.00	10.81
15	ATOM	3884	CG1	ILE	552	35.111	45.464	38.706	1.00	11.02
	ATOM	3885	CD1	ILE	552	34.654	44.656	37.494	1.00	11.29
	ATOM	3886	C	ILE	552	37.195	43.826	40.404	1.00	11.68
	ATOM	3887	O	ILE	552	37.940	44.198	39.499	1.00	12.19
	ATOM	3888	N	ARG	553	37.607	43.692	41.660	1.00	11.17
20	ATOM	3889	CA	ARG	553	38.989	43.952	42.055	1.00	10.89
	ATOM	3890	CB	ARG	553	39.156	43.668	43.549	1.00	11.30
	ATOM	3891	CG	ARG	553	38.686	42.265	43.958	1.00	13.00
	ATOM	3892	CD	ARG	553	38.704	42.074	45.474	1.00	13.72
	ATOM	3893	NE	ARG	553	37.886	43.088	46.134	1.00	10.87
25	ATOM	3894	CZ	ARG	553	37.634	43.123	47.439	1.00	13.84
	ATOM	3895	NH1	ARG	553	38.132	42.196	48.247	1.00	11.15
	ATOM	3896	NH2	ARG	553	36.889	44.100	47.941	1.00	13.85
	ATOM	3897	C	ARG	553	39.971	43.071	41.260	1.00	12.16
	ATOM	3898	O	ARG	553	41.105	43.478	40.990	1.00	11.49
30	ATOM	3899	N	TYR	554	39.539	41.871	40.881	1.00	10.69
	ATOM	3900	CA	TYR	554	40.408	40.965	40.130	1.00	12.89
	ATOM	3901	CB	TYR	554	39.882	39.525	40.215	1.00	10.20
	ATOM	3902	CG	TYR	554	39.814	39.009	41.640	1.00	12.03
	ATOM	3903	CD1	TYR	554	38.586	38.818	42.274	1.00	14.17
35	ATOM	3904	CE1	TYR	554	38.515	38.381	43.599	1.00	13.54
	ATOM	3905	CD2	TYR	554	40.978	38.750	42.367	1.00	12.66
	ATOM	3906	CE2	TYR	554	40.920	38.317	43.695	1.00	13.05
	ATOM	3907	CZ	TYR	554	39.683	38.133	44.302	1.00	13.70
	ATOM	3908	OH	TYR	554	39.603	37.697	45.610	1.00	13.05
40	ATOM	3909	C	TYR	554	40.558	41.394	38.672	1.00	12.72
	ATOM	3910	O	TYR	554	41.599	41.152	38.051	1.00	12.24
	ATOM	3911	N	PHE	555	39.515	42.016	38.128	1.00	10.68
	ATOM	3912	CA	PHE	555	39.550	42.509	36.750	1.00	11.93
	ATOM	3913	CB	PHE	555	38.154	42.980	36.317	1.00	11.21
45	ATOM	3914	CG	PHE	555	38.125	43.646	34.968	1.00	14.00
	ATOM	3915	CD1	PHE	555	38.050	42.892	33.801	1.00	14.57
	ATOM	3916	CD2	PHE	555	38.193	45.031	34.867	1.00	15.09
	ATOM	3917	CE1	PHE	555	38.043	43.510	32.549	1.00	16.67
	ATOM	3918	CE2	PHE	555	38.189	45.660	33.619	1.00	17.16
50	ATOM	3919	CZ	PHE	555	38.113	44.899	32.458	1.00	17.19
	ATOM	3920	C	PHE	555	40.527	43.689	36.735	1.00	13.11
	ATOM	3921	O	PHE	555	41.400	43.779	35.872	1.00	13.19
	ATOM	3922	N	VAL	556	40.366	44.592	37.698	1.00	10.88
	ATOM	3923	CA	VAL	556	41.239	45.753	37.809	1.00	11.92
55	ATOM	3924	CB	VAL	556	40.830	46.642	39.004	1.00	11.44
	ATOM	3925	CG1	VAL	556	41.847	47.767	39.202	1.00	13.68
	ATOM	3926	CG2	VAL	556	39.433	47.226	38.757	1.00	12.64
	ATOM	3927	C	VAL	556	42.683	45.276	37.989	1.00	12.43
	ATOM	3928	O	VAL	556	43.590	45.746	37.308	1.00	12.45
60	ATOM	3929	N	SER	557	42.882	44.325	38.895	1.00	12.83
	ATOM	3930	CA	SER	557	44.211	43.781	39.156	1.00	13.38

	ATOM	3931	SER	557	44.124	42.658	40.321	1.00	14.45
	ATOM	3932	OG SER	557	45.366	41.981	40.321	1.00	15.47
	ATOM	3933	C SER	557	44.915	43.252	37.908	1.00	14.80
	ATOM	3934	O SER	557	46.080	43.567	37.659	1.00	13.56
5	ATOM	3935	N PHE	558	44.220	42.438	37.123	1.00	13.85
	ATOM	3936	CA PHE	558	44.843	41.878	35.936	1.00	16.13
	ATOM	3937	CB PHE	558	43.930	40.813	35.311	1.00	14.35
	ATOM	3938	CG PHE	558	44.109	39.446	35.921	1.00	12.86
	ATOM	3939	CD1 PHE	558	44.081	39.279	37.304	1.00	14.64
10	ATOM	3940	CD2 PHE	558	44.352	38.336	35.116	1.00	12.97
	ATOM	3941	CE1 PHE	558	44.301	38.021	37.881	1.00	14.77
	ATOM	3942	CE2 PHE	558	44.570	37.081	35.674	1.00	14.28
	ATOM	3943	CZ PHE	558	44.546	36.921	37.061	1.00	14.43
	ATOM	3944	C PHE	558	45.265	42.937	34.923	1.00	17.21
15	ATOM	3945	O PHE	558	46.248	42.757	34.210	1.00	18.29
	ATOM	3946	N ILE	559	44.545	44.052	34.875	1.00	17.72
	ATOM	3947	CA ILE	559	44.907	45.124	33.956	1.00	17.85
	ATOM	3948	CB ILE	559	43.754	46.148	33.780	1.00	19.20
	ATOM	3949	CG2 ILE	559	44.260	47.363	33.011	1.00	19.44
20	ATOM	3950	CG1 ILE	559	42.564	45.502	33.064	1.00	21.05
	ATOM	3951	CD1 ILE	559	42.807	45.211	31.605	1.00	22.66
	ATOM	3952	C ILE	559	46.120	45.891	34.491	1.00	16.91
	ATOM	3953	O ILE	559	47.155	45.991	33.826	1.00	18.09
	ATOM	3954	N ILE	560	45.991	46.417	35.704	1.00	15.99
25	ATOM	3955	CA ILE	560	47.056	47.221	36.294	1.00	14.87
	ATOM	3956	CB ILE	560	46.560	47.971	37.563	1.00	15.25
	ATOM	3957	CG2 ILE	560	45.253	48.708	37.249	1.00	13.63
	ATOM	3958	CG1 ILE	560	46.366	46.996	38.725	1.00	14.28
	ATOM	3959	CD1 ILE	560	45.970	47.678	40.039	1.00	14.84
30	ATOM	3960	C ILE	560	48.337	46.467	36.639	1.00	16.49
	ATOM	3961	O ILE	560	49.415	47.060	36.666	1.00	14.18
	ATOM	3962	N GLN	561	48.245	45.167	36.900	1.00	15.61
	ATOM	3963	CA GLN	561	49.461	44.443	37.233	1.00	16.41
	ATOM	3964	CB GLN	561	49.152	43.001	37.663	1.00	15.73
35	ATOM	3965	CG GLN	561	48.557	42.090	36.604	1.00	14.21
	ATOM	3966	CD GLN	561	48.239	40.715	37.171	1.00	17.73
	ATOM	3967	OE1 GLN	561	48.834	39.715	36.771	1.00	16.09
	ATOM	3968	NE2 GLN	561	47.300	40.664	38.121	1.00	14.54
	ATOM	3969	C GLN	561	50.450	44.476	36.064	1.00	16.86
40	ATOM	3970	O GLN	561	51.664	44.434	36.273	1.00	16.40
	ATOM	3971	N PHE	562	49.939	44.565	34.836	1.00	15.77
	ATOM	3972	CA PHE	562	50.824	44.631	33.684	1.00	16.79
	ATOM	3973	CB PHE	562	50.096	44.217	32.399	1.00	15.11
	ATOM	3974	CG PHE	562	49.994	42.729	32.236	1.00	16.63
45	ATOM	3975	CD1 PHE	562	48.911	42.029	32.757	1.00	14.63
	ATOM	3976	CD2 PHE	562	51.037	42.012	31.648	1.00	18.81
	ATOM	3977	CE1 PHE	562	48.865	40.637	32.705	1.00	18.62
	ATOM	3978	CE2 PHE	562	51.006	40.615	31.589	1.00	18.29
	ATOM	3979	CZ PHE	562	49.915	39.927	32.121	1.00	17.80
50	ATOM	3980	C PHE	562	51.385	46.042	33.579	1.00	17.19
	ATOM	3981	O PHE	562	52.517	46.238	33.143	1.00	15.79
	ATOM	3982	N GLN	563	50.592	47.022	33.998	1.00	16.85
	ATOM	3983	CA GLN	563	51.043	48.407	34.001	1.00	18.71
	ATOM	3984	CB GLN	563	49.909	49.347	34.418	1.00	18.72
55	ATOM	3985	CG GLN	563	48.890	49.651	33.335	1.00	16.23
	ATOM	3986	CD GLN	563	47.819	50.607	33.825	1.00	18.40
	ATOM	3987	OE1 GLN	563	46.777	50.188	34.326	1.00	16.56
	ATOM	3988	NE2 GLN	563	48.084	51.908	33.700	1.00	15.19
	ATOM	3989	C GLN	563	52.184	48.528	35.011	1.00	18.91
60	ATOM	3990	O GLN	563	53.159	49.237	34.773	1.00	21.62
	ATOM	3991	N PHE	564	52.048	47.846	36.148	1.00	17.60

	ATOM	3992	CA	PHE	564	53.082	47.879	179	1.00	17.70
	ATOM	3993	CB	PHE	564	52.576	47.237	38.479	1.00	16.56
	ATOM	3994	CG	PHE	564	51.412	47.961	39.114	1.00	16.88
	ATOM	3995	CD1	PHE	564	51.009	49.216	38.655	1.00	17.26
5	ATOM	3996	CD2	PHE	564	50.732	47.393	40.193	1.00	17.51
	ATOM	3997	CE1	PHE	564	49.948	49.896	39.262	1.00	17.30
	ATOM	3998	CE2	PHE	564	49.668	48.065	40.811	1.00	16.87
	ATOM	3999	CZ	PHE	564	49.275	49.316	40.346	1.00	17.82
	ATOM	4000	C	PHE	564	54.320	47.132	36.682	1.00	18.19
10	ATOM	4001	O	PHE	564	55.448	47.583	36.866	1.00	16.35
	ATOM	4002	N	HIS	565	54.103	45.980	36.058	1.00	18.26
	ATOM	4003	CA	HIS	565	55.201	45.191	35.523	1.00	17.93
	ATOM	4004	CB	HIS	565	54.652	43.948	34.813	1.00	16.92
	ATOM	4005	CG	HIS	565	55.712	43.026	34.290	1.00	19.54
15	ATOM	4006	CD2	HIS	565	55.963	42.577	33.036	1.00	18.23
	ATOM	4007	ND1	HIS	565	56.645	42.424	35.106	1.00	19.14
	ATOM	4008	CE1	HIS	565	57.423	41.641	34.379	1.00	19.86
	ATOM	4009	NE2	HIS	565	57.030	41.716	33.120	1.00	18.37
	ATOM	4010	C	HIS	565	56.001	46.053	34.536	1.00	19.62
20	ATOM	4011	O	HIS	565	57.224	46.140	34.623	1.00	19.79
	ATOM	4012	N	GLU	566	55.299	46.692	33.605	1.00	19.55
	ATOM	4013	CA	GLU	566	55.938	47.546	32.607	1.00	21.41
	ATOM	4014	CB	GLU	566	54.874	48.175	31.702	1.00	21.29
	ATOM	4015	CG	GLU	566	55.420	49.067	30.595	1.00	22.84
25	ATOM	4016	CD	GLU	566	54.320	49.736	29.798	1.00	23.16
	ATOM	4017	OE1	GLU	566	53.587	50.571	30.370	1.00	25.71
	ATOM	4018	OE2	GLU	566	54.180	49.423	28.599	1.00	24.72
	ATOM	4019	C	GLU	566	56.781	48.645	33.259	1.00	22.27
	ATOM	4020	O	GLU	566	57.954	48.823	32.920	1.00	22.02
30	ATOM	4021	N	ALA	567	56.185	49.375	34.199	1.00	22.14
	ATOM	4022	CA	ALA	567	56.884	50.457	34.887	1.00	22.62
	ATOM	4023	CB	ALA	567	55.918	51.206	35.794	1.00	21.46
	ATOM	4024	C	ALA	567	58.081	49.966	35.698	1.00	23.23
	ATOM	4025	O	ALA	567	59.165	50.544	35.633	1.00	21.96
35	ATOM	4026	N	LEU	568	57.884	48.898	36.463	1.00	23.52
	ATOM	4027	CA	LEU	568	58.953	48.353	37.287	1.00	24.49
	ATOM	4028	CB	LEU	568	58.427	47.204	38.149	1.00	23.80
	ATOM	4029	CG	LEU	568	57.319	47.563	39.146	1.00	25.68
	ATOM	4030	CD1	LEU	568	56.974	46.337	39.976	1.00	24.01
40	ATOM	4031	CD2	LEU	568	57.770	48.705	40.047	1.00	24.11
	ATOM	4032	C	LEU	568	60.129	47.874	36.444	1.00	26.12
	ATOM	4033	O	LEU	568	61.287	48.041	36.835	1.00	25.53
	ATOM	4034	N	CYS	569	59.829	47.277	35.293	1.00	26.09
	ATOM	4035	CA	CYS	569	60.866	46.785	34.394	1.00	26.84
45	ATOM	4036	C	CYS	569	61.662	47.954	33.833	1.00	29.17
	ATOM	4037	O	CYS	569	62.888	47.891	33.735	1.00	29.21
	ATOM	4038	CB	CYS	569	60.245	45.983	33.251	1.00	24.41
	ATOM	4039	SG	CYS	569	59.479	44.440	33.829	1.00	23.54
	ATOM	4040	N	GLN	570	60.958	49.018	33.461	1.00	30.60
50	ATOM	4041	CA	GLN	570	61.609	50.205	32.929	1.00	33.85
	ATOM	4042	CB	GLN	570	60.560	51.241	32.508	1.00	36.01
	ATOM	4043	CG	GLN	570	61.123	52.471	31.797	1.00	40.86
	ATOM	4044	CD	GLN	570	61.634	53.535	32.755	1.00	44.93
	ATOM	4045	OE1	GLN	570	62.251	54.518	32.338	1.00	47.36
55	ATOM	4046	NE2	GLN	570	61.370	53.349	34.044	1.00	46.77
	ATOM	4047	C	GLN	570	62.518	50.774	34.018	1.00	34.13
	ATOM	4048	O	GLN	570	63.651	51.168	33.750	1.00	35.84
	ATOM	4049	N	ALA	571	62.023	50.793	35.252	1.00	33.88
	ATOM	4050	CA	ALA	571	62.798	51.308	36.376	1.00	33.88
60	ATOM	4051	CB	ALA	571	61.922	51.397	37.616	1.00	33.43
	ATOM	4052	C	ALA	571	64.008	50.421	36.655	1.00	34.68

	ATOM	4053	ALA	571	65.025	50.891	37.1	1.00	33.79
	ATOM	4054	N ALA	572	63.894	49.140	36.314	1.00	34.10
	ATOM	4055	CA ALA	572	64.979	48.187	36.529	1.00	34.04
	ATOM	4056	CB ALA	572	64.414	46.781	36.698	1.00	31.78
5	ATOM	4057	C ALA	572	65.987	48.209	35.381	1.00	34.28
	ATOM	4058	O ALA	572	66.963	47.456	35.387	1.00	33.48
	ATOM	4059	N GLY	573	65.740	49.067	34.396	1.00	35.90
	ATOM	4060	CA GLY	573	66.639	49.173	33.261	1.00	36.02
	ATOM	4061	C GLY	573	66.486	48.083	32.214	1.00	36.88
10	ATOM	4062	O GLY	573	67.380	47.876	31.391	1.00	36.25
	ATOM	4063	N HIS	574	65.357	47.381	32.232	1.00	36.48
	ATOM	4064	CA HIS	574	65.124	46.320	31.262	1.00	34.33
	ATOM	4065	CB HIS	574	63.916	45.472	31.661	1.00	35.35
	ATOM	4066	CG HIS	574	63.584	44.400	30.670	1.00	36.05
15	ATOM	4067	CD2 HIS	574	62.614	44.325	29.727	1.00	36.62
	ATOM	4068	ND1 HIS	574	64.327	43.245	30.547	1.00	36.78
	ATOM	4069	CE1 HIS	574	63.829	42.506	29.571	1.00	36.45
	ATOM	4070	NE2 HIS	574	62.790	43.138	29.057	1.00	35.54
	ATOM	4071	C HIS	574	64.874	46.906	29.881	1.00	33.60
20	ATOM	4072	O HIS	574	64.237	47.946	29.743	1.00	33.03
	ATOM	4073	N THR	575	65.380	46.227	28.859	1.00	32.54
	ATOM	4074	CA THR	575	65.192	46.671	27.488	1.00	33.83
	ATOM	4075	CB THR	575	66.501	47.234	26.889	1.00	34.38
	ATOM	4076	OG1 THR	575	67.435	46.166	26.684	1.00	35.54
25	ATOM	4077	CG2 THR	575	67.115	48.261	27.831	1.00	35.04
	ATOM	4078	C THR	575	64.751	45.462	26.676	1.00	33.06
	ATOM	4079	O THR	575	65.060	44.322	27.030	1.00	33.26
	ATOM	4080	N GLY	576	64.023	45.711	25.594	1.00	32.96
	ATOM	4081	CA GLY	576	63.554	44.618	24.764	1.00	32.46
30	ATOM	4082	C GLY	576	62.144	44.192	25.125	1.00	32.04
	ATOM	4083	O GLY	576	61.479	44.862	25.915	1.00	32.23
	ATOM	4084	N PRO	577	61.663	43.068	24.571	1.00	31.90
	ATOM	4085	CD PRO	577	62.410	42.136	23.709	1.00	30.59
	ATOM	4086	CA PRO	577	60.314	42.558	24.841	1.00	29.53
35	ATOM	4087	CB PRO	577	60.351	41.158	24.235	1.00	30.83
	ATOM	4088	CG PRO	577	61.297	41.321	23.087	1.00	32.27
	ATOM	4089	C PRO	577	59.972	42.538	26.329	1.00	28.72
	ATOM	4090	O PRO	577	60.709	41.981	27.143	1.00	28.66
	ATOM	4091	N LEU	578	58.842	43.146	26.672	1.00	27.32
40	ATOM	4092	CA LEU	578	58.393	43.211	28.055	1.00	25.47
	ATOM	4093	CB LEU	578	57.073	43.990	28.135	1.00	24.84
	ATOM	4094	CG LEU	578	56.462	44.208	29.523	1.00	23.79
	ATOM	4095	CD1 LEU	578	57.435	44.990	30.395	1.00	23.05
	ATOM	4096	CD2 LEU	578	55.141	44.962	29.390	1.00	24.13
45	ATOM	4097	C LEU	578	58.224	41.831	28.695	1.00	24.37
	ATOM	4098	O LEU	578	58.540	41.646	29.874	1.00	25.18
	ATOM	4099	N HIS	579	57.743	40.855	27.927	1.00	22.93
	ATOM	4100	CA HIS	579	57.533	39.521	28.482	1.00	22.45
	ATOM	4101	CB HIS	579	56.736	38.635	27.511	1.00	22.24
50	ATOM	4102	CG HIS	579	57.512	38.181	26.313	1.00	22.10
	ATOM	4103	CD2 HIS	579	58.201	37.038	26.080	1.00	23.76
	ATOM	4104	ND1 HIS	579	57.627	38.938	25.166	1.00	24.64
	ATOM	4105	CE1 HIS	579	58.350	38.279	24.277	1.00	25.23
	ATOM	4106	NE2 HIS	579	58.711	37.123	24.807	1.00	25.73
55	ATOM	4107	C HIS	579	58.810	38.796	28.900	1.00	23.53
	ATOM	4108	O HIS	579	58.744	37.743	29.535	1.00	24.05
	ATOM	4109	N LYS	580	59.968	39.348	28.547	1.00	23.73
	ATOM	4110	CA LYS	580	61.244	38.734	28.919	1.00	26.19
	ATOM	4111	CB LYS	580	62.272	38.902	27.794	1.00	27.71
60	ATOM	4112	CG LYS	580	61.993	38.075	26.553	1.00	31.25
	ATOM	4113	CD LYS	580	63.043	38.351	25.481	1.00	34.78

	ATOM	4114	CE	LYS	580	62.733	37.611	191	1.00	37.22
	ATOM	4115	NZ	LYS	580	63.671	37.995	23.096	1.00	40.53
	ATOM	4116	C	LYS	580	61.811	39.340	30.206	1.00	26.16
	ATOM	4117	O	LYS	580	62.850	38.903	30.706	1.00	23.22
5	ATOM	4118	N	CYS	581	61.124	40.344	30.739	1.00	24.41
	ATOM	4119	CA	CYS	581	61.569	41.006	31.959	1.00	23.52
	ATOM	4120	C	CYS	581	61.407	40.186	33.240	1.00	24.04
	ATOM	4121	O	CYS	581	60.418	39.469	33.419	1.00	21.53
	ATOM	4122	CB	CYS	581	60.838	42.342	32.119	1.00	23.29
10	ATOM	4123	SG	CYS	581	61.004	43.098	33.770	1.00	24.70
	ATOM	4124	N	ASP	582	62.400	40.306	34.121	1.00	21.19
	ATOM	4125	CA	ASP	582	62.419	39.637	35.421	1.00	22.50
	ATOM	4126	CB	ASP	582	63.317	38.394	35.392	1.00	22.61
	ATOM	4127	CG	ASP	582	63.390	37.685	36.742	1.00	23.83
15	ATOM	4128	OD1	ASP	582	62.906	38.239	37.758	1.00	24.26
	ATOM	4129	OD2	ASP	582	63.947	36.567	36.793	1.00	23.11
	ATOM	4130	C	ASP	582	63.010	40.680	36.360	1.00	24.44
	ATOM	4131	O	ASP	582	64.211	40.968	36.302	1.00	24.08
	ATOM	4132	N	ILE	583	62.165	41.253	37.213	1.00	22.22
20	ATOM	4133	CA	ILE	583	62.601	42.294	38.138	1.00	21.09
	ATOM	4134	CB	ILE	583	61.413	43.184	38.568	1.00	19.80
	ATOM	4135	CG2	ILE	583	60.751	43.796	37.340	1.00	18.47
	ATOM	4136	CG1	ILE	583	60.408	42.355	39.369	1.00	19.27
	ATOM	4137	CD1	ILE	583	59.301	43.181	40.010	1.00	21.03
25	ATOM	4138	C	ILE	583	63.279	41.779	39.401	1.00	21.02
	ATOM	4139	O	ILE	583	63.533	42.552	40.325	1.00	21.75
	ATOM	4140	N	TYR	584	63.575	40.484	39.445	1.00	21.19
	ATOM	4141	CA	TYR	584	64.220	39.906	40.620	1.00	22.52
	ATOM	4142	CB	TYR	584	64.660	38.466	40.346	1.00	23.63
30	ATOM	4143	CG	TYR	584	65.245	37.787	41.565	1.00	25.38
	ATOM	4144	CD1	TYR	584	64.420	37.304	42.576	1.00	24.65
	ATOM	4145	CE1	TYR	584	64.951	36.724	43.725	1.00	26.30
	ATOM	4146	CD2	TYR	584	66.625	37.672	41.731	1.00	25.96
	ATOM	4147	CE2	TYR	584	67.167	37.095	42.878	1.00	27.41
35	ATOM	4148	CZ	TYR	584	66.325	36.624	43.869	1.00	27.35
	ATOM	4149	OH	TYR	584	66.852	36.048	45.003	1.00	29.28
	ATOM	4150	C	TYR	584	65.434	40.721	41.068	1.00	22.10
	ATOM	4151	O	TYR	584	66.273	41.102	40.252	1.00	19.45
	ATOM	4152	N	GLN	585	65.501	40.980	42.373	1.00	24.34
40	ATOM	4153	CA	GLN	585	66.581	41.736	43.014	1.00	25.79
	ATOM	4154	CB	GLN	585	67.937	41.063	42.740	1.00	27.46
	ATOM	4155	CG	GLN	585	69.106	41.754	43.433	1.00	30.44
	ATOM	4156	CD	GLN	585	70.383	40.939	43.418	1.00	32.54
	ATOM	4157	OE1	GLN	585	71.474	41.474	43.621	1.00	33.54
45	ATOM	4158	NE2	GLN	585	70.253	39.636	43.194	1.00	31.30
	ATOM	4159	C	GLN	585	66.666	43.231	42.687	1.00	25.96
	ATOM	4160	O	GLN	585	67.585	43.919	43.139	1.00	27.28
	ATOM	4161	N	SER	586	65.707	43.747	41.924	1.00	24.70
	ATOM	4162	CA	SER	586	65.716	45.165	41.577	1.00	25.28
50	ATOM	4163	CB	SER	586	64.829	45.436	40.365	1.00	24.97
	ATOM	4164	OG	SER	586	64.667	46.834	40.178	1.00	25.13
	ATOM	4165	C	SER	586	65.247	46.047	42.728	1.00	26.57
	ATOM	4166	O	SER	586	64.072	46.026	43.103	1.00	26.45
	ATOM	4167	N	LYS	587	66.167	46.832	43.277	1.00	25.12
55	ATOM	4168	CA	LYS	587	65.843	47.724	44.378	1.00	26.77
	ATOM	4169	CB	LYS	587	67.126	48.207	45.067	1.00	26.74
	ATOM	4170	CG	LYS	587	67.944	47.087	45.702	1.00	27.54
	ATOM	4171	CD	LYS	587	67.119	46.297	46.712	1.00	27.45
	ATOM	4172	CE	LYS	587	67.925	45.161	47.332	1.00	26.21
60	ATOM	4173	NZ	LYS	587	68.401	44.190	46.311	1.00	25.90
	ATOM	4174	C	LYS	587	65.022	48.918	43.897	1.00	25.59

	ATOM	4175	LYS	587	64.201	49.448	44.611	1.00	26.97
	ATOM	4176	N GLU	588	65.245	49.344	42.657	1.00	24.23
	ATOM	4177	CA GLU	588	64.496	50.467	42.104	1.00	25.34
	ATOM	4178	CB GLU	588	65.025	50.849	40.718	1.00	29.07
5	ATOM	4179	CG GLU	588	66.440	51.417	40.693	1.00	34.67
	ATOM	4180	CD GLU	588	67.496	50.393	41.060	1.00	38.21
	ATOM	4181	OE1 GLU	588	67.482	49.283	40.480	1.00	38.94
	ATOM	4182	OE2 GLU	588	68.348	50.704	41.921	1.00	41.97
10	ATOM	4183	C GLU	588	63.021	50.071	41.987	1.00	25.42
	ATOM	4184	O GLU	588	62.125	50.880	42.238	1.00	22.32
	ATOM	4185	N ALA	589	62.783	48.822	41.596	1.00	24.18
	ATOM	4186	CA ALA	589	61.426	48.306	41.452	1.00	24.57
	ATOM	4187	CB ALA	589	61.455	46.903	40.851	1.00	24.39
	ATOM	4188	C ALA	589	60.761	48.271	42.822	1.00	24.55
15	ATOM	4189	O ALA	589	59.665	48.801	43.009	1.00	24.25
	ATOM	4190	N GLY	590	61.439	47.646	43.778	1.00	23.98
	ATOM	4191	CA GLY	590	60.902	47.551	45.121	1.00	26.42
	ATOM	4192	C GLY	590	60.582	48.897	45.746	1.00	27.69
	ATOM	4193	O GLY	590	59.577	49.039	46.442	1.00	28.18
20	ATOM	4194	N GLN	591	61.429	49.890	45.500	1.00	27.79
	ATOM	4195	CA GLN	591	61.214	51.214	46.066	1.00	29.11
	ATOM	4196	CB GLN	591	62.376	52.143	45.715	1.00	31.76
	ATOM	4197	CG GLN	591	62.271	53.502	46.384	1.00	36.94
	ATOM	4198	CD GLN	591	62.181	53.386	47.896	1.00	41.21
25	ATOM	4199	OE1 GLN	591	63.116	52.925	48.554	1.00	44.17
	ATOM	4200	NE2 GLN	591	61.048	53.795	48.454	1.00	43.27
	ATOM	4201	C GLN	591	59.904	51.843	45.600	1.00	28.84
	ATOM	4202	O GLN	591	59.228	52.522	46.371	1.00	26.01
	ATOM	4203	N ARG	592	59.547	51.625	44.340	1.00	28.52
30	ATOM	4204	CA ARG	592	58.307	52.191	43.823	1.00	29.49
	ATOM	4205	CB ARG	592	58.258	52.089	42.298	1.00	30.74
	ATOM	4206	CG ARG	592	59.232	53.022	41.610	1.00	33.59
	ATOM	4207	CD ARG	592	58.864	53.215	40.162	1.00	34.84
	ATOM	4208	NE ARG	592	59.817	54.071	39.469	1.00	36.89
35	ATOM	4209	CZ ARG	592	59.720	54.401	38.187	1.00	39.66
	ATOM	4210	NH1 ARG	592	58.706	53.948	37.460	1.00	40.17
	ATOM	4211	NH2 ARG	592	60.641	55.173	37.628	1.00	40.49
	ATOM	4212	C ARG	592	57.086	51.515	44.428	1.00	28.08
	ATOM	4213	O ARG	592	56.103	52.177	44.758	1.00	30.13
40	ATOM	4214	N LEU	593	57.144	50.197	44.576	1.00	25.72
	ATOM	4215	CA LEU	593	56.028	49.468	45.162	1.00	24.31
	ATOM	4216	CB LEU	593	56.257	47.960	45.061	1.00	23.41
	ATOM	4217	CG LEU	593	56.003	47.293	43.710	1.00	24.09
	ATOM	4218	CD1 LEU	593	56.340	45.814	43.814	1.00	22.31
45	ATOM	4219	CD2 LEU	593	54.541	47.482	43.309	1.00	24.13
	ATOM	4220	C LEU	593	55.856	49.851	46.630	1.00	24.61
	ATOM	4221	O LEU	593	54.734	50.014	47.113	1.00	22.28
	ATOM	4222	N ALA	594	56.979	49.994	47.327	1.00	22.88
	ATOM	4223	CA ALA	594	56.975	50.342	48.743	1.00	24.40
50	ATOM	4224	CB ALA	594	58.400	50.304	49.299	1.00	23.81
	ATOM	4225	C ALA	594	56.350	51.704	49.016	1.00	23.79
	ATOM	4226	O ALA	594	55.480	51.824	49.878	1.00	24.99
	ATOM	4227	N THR	595	56.784	52.729	48.288	1.00	23.07
	ATOM	4228	CA THR	595	56.244	54.065	48.506	1.00	26.20
55	ATOM	4229	CB THR	595	56.956	55.126	47.627	1.00	28.03
	ATOM	4230	OG1 THR	595	56.705	54.861	46.242	1.00	35.56
	ATOM	4231	CG2 THR	595	58.457	55.094	47.873	1.00	28.43
	ATOM	4232	C THR	595	54.745	54.092	48.218	1.00	25.47
	ATOM	4233	O THR	595	53.983	54.780	48.901	1.00	24.49
60	ATOM	4234	N ALA	596	54.326	53.331	47.211	1.00	23.19
	ATOM	4235	CA ALA	596	52.918	53.265	46.846	1.00	22.32

	ATOM	4236	CB	ALA	596	52.756	52.563	49.496	1.00	22.20
	ATOM	4237	C	ALA	596	52.123	52.530	47.919	1.00	20.86
	ATOM	4238	O	ALA	596	51.067	52.993	48.347	1.00	21.03
	ATOM	4239	N	MET	597	52.631	51.385	48.362	1.00	20.23
5	ATOM	4240	CA	MET	597	51.930	50.608	49.376	1.00	20.17
	ATOM	4241	CB	MET	597	52.610	49.249	49.581	1.00	18.97
	ATOM	4242	CG	MET	597	52.435	48.280	48.412	1.00	18.62
	ATOM	4243	SD	MET	597	53.001	46.611	48.797	1.00	20.81
	ATOM	4244	CE	MET	597	54.714	46.755	48.344	1.00	18.21
10	ATOM	4245	C	MET	597	51.824	51.338	50.710	1.00	21.22
	ATOM	4246	O	MET	597	50.834	51.194	51.426	1.00	19.46
	ATOM	4247	N	LYS	598	52.839	52.128	51.039	1.00	22.34
	ATOM	4248	CA	LYS	598	52.845	52.863	52.298	1.00	23.65
	ATOM	4249	CB	LYS	598	54.194	53.565	52.492	1.00	23.93
15	ATOM	4250	CG	LYS	598	55.328	52.609	52.830	1.00	28.85
	ATOM	4251	CD	LYS	598	56.610	53.354	53.162	1.00	31.84
	ATOM	4252	CE	LYS	598	57.625	52.428	53.822	1.00	35.46
	ATOM	4253	NZ	LYS	598	58.006	51.266	52.967	1.00	38.87
	ATOM	4254	C	LYS	598	51.706	53.875	52.417	1.00	22.67
20	ATOM	4255	O	LYS	598	51.337	54.267	53.522	1.00	23.02
	ATOM	4256	N	LEU	599	51.154	54.299	51.284	1.00	20.77
	ATOM	4257	CA	LEU	599	50.050	55.257	51.290	1.00	20.03
	ATOM	4258	CB	LEU	599	49.807	55.812	49.883	1.00	21.69
	ATOM	4259	CG	LEU	599	50.838	56.754	49.260	1.00	22.59
25	ATOM	4260	CD1	LEU	599	50.420	57.074	47.835	1.00	22.70
	ATOM	4261	CD2	LEU	599	50.947	58.026	50.085	1.00	22.77
	ATOM	4262	C	LEU	599	48.757	54.614	51.784	1.00	20.21
	ATOM	4263	O	LEU	599	47.834	55.306	52.219	1.00	19.40
	ATOM	4264	N	GLY	600	48.690	53.290	51.717	1.00	20.15
30	ATOM	4265	CA	GLY	600	47.478	52.611	52.134	1.00	20.16
	ATOM	4266	C	GLY	600	46.297	53.228	51.402	1.00	20.63
	ATOM	4267	O	GLY	600	46.347	53.438	50.185	1.00	20.76
	ATOM	4268	N	PHE	601	45.245	53.544	52.150	1.00	20.86
	ATOM	4269	CA	PHE	601	44.031	54.143	51.593	1.00	21.23
35	ATOM	4270	CB	PHE	601	42.807	53.406	52.161	1.00	20.65
	ATOM	4271	CG	PHE	601	41.509	53.733	51.470	1.00	24.23
	ATOM	4272	CD1	PHE	601	41.340	53.471	50.115	1.00	25.84
	ATOM	4273	CD2	PHE	601	40.449	54.283	52.183	1.00	24.34
	ATOM	4274	CE1	PHE	601	40.130	53.751	49.479	1.00	28.01
40	ATOM	4275	CE2	PHE	601	39.233	54.568	51.557	1.00	27.29
	ATOM	4276	CZ	PHE	601	39.075	54.300	50.202	1.00	26.47
	ATOM	4277	C	PHE	601	43.972	55.632	51.961	1.00	20.30
	ATOM	4278	O	PHE	601	42.899	56.230	51.999	1.00	21.85
	ATOM	4279	N	SER	602	45.133	56.231	52.209	1.00	21.00
45	ATOM	4280	CA	SER	602	45.208	57.641	52.609	1.00	22.21
	ATOM	4281	CB	SER	602	46.560	57.918	53.270	1.00	22.60
	ATOM	4282	OG	SER	602	47.619	57.789	52.338	1.00	20.98
	ATOM	4283	C	SER	602	44.982	58.679	51.506	1.00	23.68
	ATOM	4284	O	SER	602	44.636	59.827	51.795	1.00	23.46
50	ATOM	4285	N	ARG	603	45.177	58.285	50.252	1.00	22.88
	ATOM	4286	CA	ARG	603	45.005	59.207	49.130	1.00	25.54
	ATOM	4287	CB	ARG	603	46.380	59.662	48.620	1.00	27.34
	ATOM	4288	CG	ARG	603	47.247	60.373	49.654	1.00	31.36
	ATOM	4289	CD	ARG	603	46.692	61.748	49.980	1.00	35.45
55	ATOM	4290	NE	ARG	603	46.606	62.585	48.784	1.00	40.01
	ATOM	4291	CZ	ARG	603	46.063	63.799	48.754	1.00	42.24
	ATOM	4292	NH1	ARG	603	45.552	64.329	49.857	1.00	44.20
	ATOM	4293	NH2	ARG	603	46.029	64.483	47.618	1.00	41.85
	ATOM	4294	C	ARG	603	44.243	58.549	47.981	1.00	23.92
60	ATOM	4295	O	ARG	603	44.199	57.330	47.884	1.00	24.89
	ATOM	4296	N	PRO	604	43.623	59.353	47.101	1.00	24.43

	ATOM	4297	PRO	604	43.538	60.825	47.111	1.00	24.47
	ATOM	4298	CA PRO	604	42.881	58.785	45.967	1.00	23.43
	ATOM	4299	CB PRO	604	42.495	60.021	45.161	1.00	24.04
	ATOM	4300	CG PRO	604	42.327	61.076	46.235	1.00	24.67
5	ATOM	4301	C PRO	604	43.856	57.874	45.217	1.00	22.52
	ATOM	4302	O PRO	604	45.017	58.241	45.026	1.00	19.66
	ATOM	4303	N TRP	605	43.397	56.702	44.784	1.00	21.06
	ATOM	4304	CA TRP	605	44.295	55.761	44.115	1.00	19.74
	ATOM	4305	CB TRP	605	43.547	54.478	43.719	1.00	17.20
10	ATOM	4306	CG TRP	605	42.556	54.624	42.617	1.00	16.80
	ATOM	4307	CD2 TRP	605	42.839	54.662	41.218	1.00	13.73
	ATOM	4308	CE2 TRP	605	41.604	54.771	40.545	1.00	13.99
	ATOM	4309	CE3 TRP	605	44.019	54.611	40.465	1.00	14.13
	ATOM	4310	CD1 TRP	605	41.198	54.716	42.736	1.00	16.73
15	ATOM	4311	NE1 TRP	605	40.619	54.802	41.496	1.00	15.70
	ATOM	4312	CZ2 TRP	605	41.514	54.835	39.153	1.00	12.90
	ATOM	4313	CZ3 TRP	605	43.929	54.674	39.083	1.00	15.39
	ATOM	4314	CH2 TRP	605	42.684	54.783	38.442	1.00	15.57
	ATOM	4315	C TRP	605	45.110	56.278	42.928	1.00	18.46
20	ATOM	4316	O TRP	605	46.203	55.777	42.671	1.00	19.34
	ATOM	4317	N PRO	606	44.599	57.271	42.179	1.00	19.18
	ATOM	4318	CD PRO	606	43.257	57.880	42.148	1.00	18.96
	ATOM	4319	CA PRO	606	45.409	57.748	41.052	1.00	20.80
	ATOM	4320	CB PRO	606	44.583	58.910	40.507	1.00	20.75
25	ATOM	4321	CG PRO	606	43.184	58.426	40.733	1.00	20.74
	ATOM	4322	C PRO	606	46.813	58.182	41.485	1.00	21.70
	ATOM	4323	O PRO	606	47.751	58.138	40.697	1.00	20.53
	ATOM	4324	N GLU	607	46.951	58.596	42.742	1.00	22.05
	ATOM	4325	CA GLU	607	48.250	59.020	43.250	1.00	23.78
30	ATOM	4326	CB GLU	607	48.102	59.712	44.606	1.00	24.14
	ATOM	4327	CG GLU	607	47.576	61.128	44.482	1.00	30.40
	ATOM	4328	CD GLU	607	47.542	61.858	45.811	1.00	32.85
	ATOM	4329	OE1 GLU	607	48.566	61.837	46.530	1.00	33.25
	ATOM	4330	OE2 GLU	607	46.493	62.457	46.127	1.00	34.78
35	ATOM	4331	C GLU	607	49.197	57.838	43.367	1.00	23.11
	ATOM	4332	O GLU	607	50.370	57.949	43.017	1.00	22.68
	ATOM	4333	N ALA	608	48.691	56.711	43.861	1.00	20.59
	ATOM	4334	CA ALA	608	49.514	55.513	43.984	1.00	21.79
	ATOM	4335	CB ALA	608	48.766	54.431	44.770	1.00	19.65
40	ATOM	4336	C ALA	608	49.854	55.014	42.575	1.00	20.36
	ATOM	4337	O ALA	608	50.941	54.484	42.341	1.00	20.96
	ATOM	4338	N MET	609	48.922	55.191	41.641	1.00	19.66
	ATOM	4339	CA MET	609	49.139	54.772	40.257	1.00	19.69
	ATOM	4340	CB MET	609	47.873	54.978	39.425	1.00	19.14
45	ATOM	4341	CG MET	609	48.052	54.689	37.933	1.00	17.12
	ATOM	4342	SD MET	609	48.510	52.964	37.574	1.00	19.73
	ATOM	4343	CE MET	609	46.861	52.188	37.611	1.00	15.34
	ATOM	4344	C MET	609	50.266	55.601	39.658	1.00	21.29
	ATOM	4345	O MET	609	51.131	55.080	38.956	1.00	21.89
50	ATOM	4346	N GLN	610	50.244	56.899	39.945	1.00	22.60
	ATOM	4347	CA GLN	610	51.254	57.820	39.444	1.00	24.68
	ATOM	4348	CB GLN	610	50.880	59.253	39.810	1.00	28.02
	ATOM	4349	CG GLN	610	51.680	60.294	39.059	1.00	32.26
	ATOM	4350	CD GLN	610	50.791	61.215	38.261	1.00	34.82
55	ATOM	4351	OE1 GLN	610	50.166	62.126	38.805	1.00	37.92
	ATOM	4352	NE2 GLN	610	50.709	60.969	36.962	1.00	39.74
	ATOM	4353	C GLN	610	52.628	57.493	40.018	1.00	25.43
	ATOM	4354	O GLN	610	53.626	57.492	39.297	1.00	26.39
	ATOM	4355	N LEU	611	52.677	57.221	41.318	1.00	25.09
60	ATOM	4356	CA LEU	611	53.936	56.889	41.976	1.00	26.89
	ATOM	4357	CB LEU	611	53.704	56.624	43.466	1.00	28.27

	ATOM	4358	CG	LEU	611	53.394	57.852	45.319	1.00	30.25
	ATOM	4359	CD1	LEU	611	53.105	57.417	45.742	1.00	30.76
	ATOM	4360	CD2	LEU	611	54.577	58.818	44.279	1.00	30.95
	ATOM	4361	C	LEU	611	54.624	55.677	41.357	1.00	25.11
5	ATOM	4362	O	LEU	611	55.850	55.622	41.271	1.00	25.06
	ATOM	4363	N	ILE	612	53.834	54.703	40.928	1.00	23.32
	ATOM	4364	CA	ILE	612	54.394	53.497	40.339	1.00	22.85
	ATOM	4365	CB	ILE	612	53.449	52.286	40.530	1.00	23.45
	ATOM	4366	CG2	ILE	612	54.042	51.054	39.856	1.00	24.69
10	ATOM	4367	CG1	ILE	612	53.216	52.018	42.017	1.00	24.83
	ATOM	4368	CD1	ILE	612	52.078	51.033	42.285	1.00	23.21
	ATOM	4369	C	ILE	612	54.678	53.607	38.844	1.00	22.85
	ATOM	4370	O	ILE	612	55.739	53.187	38.380	1.00	23.82
	ATOM	4371	N	THR	613	53.736	54.179	38.099	1.00	22.01
15	ATOM	4372	CA	THR	613	53.846	54.262	36.642	1.00	22.05
	ATOM	4373	CB	THR	613	52.552	53.740	35.993	1.00	20.57
	ATOM	4374	OG1	THR	613	51.498	54.680	36.225	1.00	19.96
	ATOM	4375	CG2	THR	613	52.151	52.397	36.600	1.00	17.72
	ATOM	4376	C	THR	613	54.164	55.608	35.989	1.00	22.43
20	ATOM	4377	O	THR	613	54.456	55.660	34.796	1.00	22.71
	ATOM	4378	N	GLY	614	54.095	56.696	36.743	1.00	24.21
	ATOM	4379	CA	GLY	614	54.392	57.987	36.150	1.00	22.90
	ATOM	4380	C	GLY	614	53.188	58.640	35.501	1.00	22.97
	ATOM	4381	O	GLY	614	53.294	59.729	34.937	1.00	21.49
25	ATOM	4382	N	GLN	615	52.046	57.962	35.554	1.00	23.88
	ATOM	4383	CA	GLN	615	50.802	58.502	35.012	1.00	21.95
	ATOM	4384	CB	GLN	615	50.581	58.015	33.574	1.00	22.47
	ATOM	4385	CG	GLN	615	50.505	56.523	33.379	1.00	22.03
	ATOM	4386	CD	GLN	615	49.156	55.988	33.763	1.00	19.05
30	ATOM	4387	OE1	GLN	615	48.129	56.540	33.362	1.00	19.51
	ATOM	4388	NE2	GLN	615	49.141	54.908	34.537	1.00	16.18
	ATOM	4389	C	GLN	615	49.689	58.095	35.989	1.00	20.81
	ATOM	4390	O	GLN	615	49.891	57.215	36.825	1.00	20.69
	ATOM	4391	N	PRO	616	48.502	58.716	35.897	1.00	19.66
35	ATOM	4392	CD	PRO	616	48.157	59.932	35.138	1.00	21.70
	ATOM	4393	CA	PRO	616	47.427	58.379	36.836	1.00	20.55
	ATOM	4394	CB	PRO	616	46.908	59.751	37.209	1.00	20.89
	ATOM	4395	CG	PRO	616	46.873	60.418	35.835	1.00	20.78
	ATOM	4396	C	PRO	616	46.267	57.457	36.457	1.00	19.89
40	ATOM	4397	O	PRO	616	45.445	57.136	37.314	1.00	19.50
	ATOM	4398	N	ASN	617	46.183	57.029	35.206	1.00	18.92
	ATOM	4399	CA	ASN	617	45.051	56.199	34.799	1.00	20.34
	ATOM	4400	CB	ASN	617	44.498	56.699	33.462	1.00	23.41
	ATOM	4401	CG	ASN	617	44.426	58.205	33.391	1.00	26.99
45	ATOM	4402	OD1	ASN	617	44.083	58.855	34.377	1.00	31.32
	ATOM	4403	ND2	ASN	617	44.732	58.761	32.219	1.00	31.42
	ATOM	4404	C	ASN	617	45.303	54.708	34.664	1.00	17.45
	ATOM	4405	O	ASN	617	46.445	54.250	34.621	1.00	17.50
	ATOM	4406	N	MET	618	44.208	53.957	34.603	1.00	16.22
50	ATOM	4407	CA	MET	618	44.279	52.520	34.387	1.00	17.60
	ATOM	4408	CB	MET	618	42.982	51.821	34.807	1.00	14.99
	ATOM	4409	CG	MET	618	42.792	51.646	36.305	1.00	15.84
	ATOM	4410	SD	MET	618	41.282	50.709	36.700	1.00	17.39
	ATOM	4411	CE	MET	618	40.045	51.984	36.543	1.00	20.05
55	ATOM	4412	C	MET	618	44.402	52.465	32.872	1.00	16.95
	ATOM	4413	O	MET	618	43.843	53.315	32.178	1.00	16.75
	ATOM	4414	N	SER	619	45.117	51.480	32.351	1.00	16.04
	ATOM	4415	CA	SER	619	45.286	51.385	30.904	1.00	16.02
	ATOM	4416	CB	SER	619	46.420	52.314	30.449	1.00	16.02
60	ATOM	4417	OG	SER	619	46.691	52.155	29.067	1.00	19.66
	ATOM	4418	C	SER	619	45.617	49.965	30.495	1.00	15.40

	ATOM	4419	SER	619	46.400	49.297	31.000	1.00	14.10	
	ATOM	4420	N	ALA	620	45.024	49.516	29.392	1.00	15.67
	ATOM	4421	CA	ALA	620	45.265	48.173	28.880	1.00	17.19
	ATOM	4422	CB	ALA	620	44.053	47.695	28.092	1.00	15.24
5	ATOM	4423	C	ALA	620	46.509	48.124	27.991	1.00	17.50
	ATOM	4424	O	ALA	620	46.909	47.052	27.533	1.00	16.59
	ATOM	4425	N	SER	621	47.124	49.282	27.755	1.00	19.02
	ATOM	4426	CA	SER	621	48.310	49.356	26.896	1.00	20.17
	ATOM	4427	CB	SER	621	48.839	50.791	26.838	1.00	19.94
10	ATOM	4428	OG	SER	621	47.940	51.611	26.112	1.00	28.11
	ATOM	4429	C	SER	621	49.443	48.420	27.296	1.00	18.71
	ATOM	4430	O	SER	621	50.023	47.752	26.448	1.00	19.01
	ATOM	4431	N	ALA	622	49.761	48.373	28.584	1.00	18.30
	ATOM	4432	CA	ALA	622	50.841	47.513	29.060	1.00	17.71
15	ATOM	4433	CB	ALA	622	51.067	47.741	30.557	1.00	17.13
	ATOM	4434	C	ALA	622	50.554	46.034	28.784	1.00	16.19
	ATOM	4435	O	ALA	622	51.410	45.305	28.271	1.00	16.07
	ATOM	4436	N	MET	623	49.350	45.591	29.122	1.00	15.56
	ATOM	4437	CA	MET	623	48.974	44.202	28.899	1.00	15.10
20	ATOM	4438	CB	MET	623	47.580	43.931	29.475	1.00	15.03
	ATOM	4439	CG	MET	623	47.133	42.489	29.348	1.00	18.59
	ATOM	4440	SD	MET	623	45.530	42.188	30.123	1.00	19.23
	ATOM	4441	CE	MET	623	45.854	40.606	30.925	1.00	19.84
	ATOM	4442	C	MET	623	49.008	43.868	27.402	1.00	16.05
25	ATOM	4443	O	MET	623	49.480	42.802	27.012	1.00	17.32
	ATOM	4444	N	LEU	624	48.508	44.774	26.566	1.00	15.21
	ATOM	4445	CA	LEU	624	48.515	44.543	25.120	1.00	18.46
	ATOM	4446	CB	LEU	624	47.735	45.649	24.396	1.00	19.41
	ATOM	4447	CG	LEU	624	46.220	45.664	24.628	1.00	22.76
30	ATOM	4448	CD1	LEU	624	45.576	46.786	23.827	1.00	21.15
	ATOM	4449	CD2	LEU	624	45.634	44.315	24.214	1.00	24.62
	ATOM	4450	C	LEU	624	49.956	44.487	24.598	1.00	19.43
	ATOM	4451	O	LEU	624	50.295	43.655	23.751	1.00	18.79
	ATOM	4452	N	SER	625	50.802	45.375	25.112	1.00	19.19
35	ATOM	4453	CA	SER	625	52.208	45.418	24.717	1.00	19.92
	ATOM	4454	CB	SER	625	52.891	46.612	25.402	1.00	22.10
	ATOM	4455	OG	SER	625	54.286	46.618	25.176	1.00	27.80
	ATOM	4456	C	SER	625	52.892	44.100	25.113	1.00	18.98
	ATOM	4457	O	SER	625	53.667	43.525	24.345	1.00	19.48
40	ATOM	4458	N	TYR	626	52.600	43.623	26.316	1.00	17.23
	ATOM	4459	CA	TYR	626	53.169	42.370	26.803	1.00	17.45
	ATOM	4460	CB	TYR	626	52.626	42.070	28.203	1.00	17.03
	ATOM	4461	CG	TYR	626	53.131	40.783	28.824	1.00	16.24
	ATOM	4462	CD1	TYR	626	54.122	40.798	29.806	1.00	18.36
45	ATOM	4463	CE1	TYR	626	54.560	39.612	30.412	1.00	16.21
	ATOM	4464	CD2	TYR	626	52.590	39.551	28.454	1.00	16.60
	ATOM	4465	CE2	TYR	626	53.018	38.367	29.046	1.00	15.67
	ATOM	4466	CZ	TYR	626	53.998	38.402	30.026	1.00	17.59
	ATOM	4467	OH	TYR	626	54.385	37.225	30.630	1.00	17.16
50	ATOM	4468	C	TYR	626	52.820	41.206	25.858	1.00	18.35
	ATOM	4469	O	TYR	626	53.676	40.379	25.534	1.00	17.96
	ATOM	4470	N	PHE	627	51.564	41.151	25.416	1.00	17.36
	ATOM	4471	CA	PHE	627	51.108	40.071	24.538	1.00	18.59
	ATOM	4472	CB	PHE	627	49.679	39.657	24.914	1.00	15.88
55	ATOM	4473	CG	PHE	627	49.585	38.913	26.208	1.00	15.40
	ATOM	4474	CD1	PHE	627	49.150	39.552	27.366	1.00	15.71
	ATOM	4475	CD2	PHE	627	49.952	37.573	26.278	1.00	15.04
	ATOM	4476	CE1	PHE	627	49.081	38.864	28.579	1.00	14.00
	ATOM	4477	CE2	PHE	627	49.889	36.874	27.483	1.00	15.01
60	ATOM	4478	CZ	PHE	627	49.453	37.519	28.636	1.00	14.97
	ATOM	4479	C	PHE	627	51.151	40.323	23.030	1.00	18.84

	ATOM	4480	O	PHE	627	50.741	39.464	22.54	1.00	19.04
	ATOM	4481	N	LYS	628	51.644	41.484	22.612	1.00	19.54
	ATOM	4482	CA	LYS	628	51.705	41.819	21.190	1.00	19.75
	ATOM	4483	CB	LYS	628	52.556	43.079	20.989	1.00	22.03
5	ATOM	4484	CG	LYS	628	52.868	43.419	19.532	1.00	23.91
	ATOM	4485	CD	LYS	628	51.621	43.760	18.727	1.00	27.23
	ATOM	4486	CE	LYS	628	52.002	44.196	17.306	1.00	30.31
	ATOM	4487	NZ	LYS	628	50.817	44.449	16.440	1.00	30.49
	ATOM	4488	C	LYS	628	52.217	40.692	20.283	1.00	20.01
10	ATOM	4489	O	LYS	628	51.584	40.365	19.281	1.00	21.94
	ATOM	4490	N	PRO	629	53.369	40.087	20.611	1.00	20.55
	ATOM	4491	CD	PRO	629	54.306	40.351	21.717	1.00	22.46
	ATOM	4492	CA	PRO	629	53.867	39.008	19.749	1.00	21.49
	ATOM	4493	CB	PRO	629	55.151	38.566	20.450	1.00	21.82
15	ATOM	4494	CG	PRO	629	55.607	39.818	21.155	1.00	23.13
	ATOM	4495	C	PRO	629	52.857	37.867	19.613	1.00	20.35
	ATOM	4496	O	PRO	629	52.732	37.256	18.553	1.00	19.97
	ATOM	4497	N	LEU	630	52.131	37.583	20.687	1.00	19.10
	ATOM	4498	CA	LEU	630	51.150	36.510	20.649	1.00	18.86
20	ATOM	4499	CB	LEU	630	50.695	36.135	22.059	1.00	17.73
	ATOM	4500	CG	LEU	630	49.725	34.946	22.116	1.00	18.16
	ATOM	4501	CD1	LEU	630	50.447	33.682	21.698	1.00	17.06
	ATOM	4502	CD2	LEU	630	49.167	34.789	23.525	1.00	17.08
	ATOM	4503	C	LEU	630	49.945	36.906	19.807	1.00	18.76
25	ATOM	4504	O	LEU	630	49.448	36.106	19.016	1.00	20.28
	ATOM	4505	N	LEU	631	49.480	38.140	19.972	1.00	18.81
	ATOM	4506	CA	LEU	631	48.332	38.617	19.207	1.00	19.95
	ATOM	4507	CB	LEU	631	48.025	40.079	19.543	1.00	18.70
	ATOM	4508	CG	LEU	631	46.896	40.731	18.735	1.00	21.74
30	ATOM	4509	CD1	LEU	631	45.584	40.002	18.990	1.00	23.52
	ATOM	4510	CD2	LEU	631	46.766	42.196	19.119	1.00	22.39
	ATOM	4511	C	LEU	631	48.599	38.482	17.709	1.00	21.61
	ATOM	4512	O	LEU	631	47.725	38.048	16.955	1.00	18.83
	ATOM	4513	N	ASP	632	49.804	38.855	17.281	1.00	21.33
35	ATOM	4514	CA	ASP	632	50.160	38.756	15.869	1.00	21.95
	ATOM	4515	CB	ASP	632	51.525	39.405	15.604	1.00	23.60
	ATOM	4516	CG	ASP	632	51.516	40.903	15.839	1.00	24.22
	ATOM	4517	OD1	ASP	632	50.469	41.541	15.604	1.00	26.63
	ATOM	4518	OD2	ASP	632	52.562	41.447	16.243	1.00	26.55
40	ATOM	4519	C	ASP	632	50.197	37.293	15.425	1.00	21.32
	ATOM	4520	O	ASP	632	49.742	36.964	14.330	1.00	20.49
	ATOM	4521	N	TRP	633	50.736	36.418	16.271	1.00	19.81
	ATOM	4522	CA	TRP	633	50.808	34.998	15.929	1.00	20.07
	ATOM	4523	CB	TRP	633	51.595	34.213	16.987	1.00	19.94
45	ATOM	4524	CG	TRP	633	51.761	32.756	16.632	1.00	21.13
	ATOM	4525	CD2	TRP	633	50.902	31.674	17.019	1.00	21.92
	ATOM	4526	CE2	TRP	633	51.389	30.505	16.388	1.00	22.13
	ATOM	4527	CE3	TRP	633	49.766	31.578	17.836	1.00	22.40
	ATOM	4528	CD1	TRP	633	52.712	32.211	15.807	1.00	22.30
50	ATOM	4529	NE1	TRP	633	52.492	30.860	15.656	1.00	21.61
	ATOM	4530	CZ2	TRP	633	50.779	29.255	16.549	1.00	22.73
	ATOM	4531	CZ3	TRP	633	49.158	30.333	17.996	1.00	23.58
	ATOM	4532	CH2	TRP	633	49.669	29.189	17.354	1.00	24.12
	ATOM	4533	C	TRP	633	49.402	34.407	15.817	1.00	20.16
55	ATOM	4534	O	TRP	633	49.120	33.624	14.908	1.00	20.21
	ATOM	4535	N	LEU	634	48.528	34.788	16.745	1.00	18.10
	ATOM	4536	CA	LEU	634	47.152	34.291	16.767	1.00	17.96
	ATOM	4537	CB	LEU	634	46.433	34.766	18.033	1.00	13.19
	ATOM	4538	CG	LEU	634	46.823	34.058	19.331	1.00	15.98
60	ATOM	4539	CD1	LEU	634	46.121	34.731	20.512	1.00	15.76
	ATOM	4540	CD2	LEU	634	46.433	32.585	19.242	1.00	17.65

	ATOM	4541	LEU	634	46.358	34.720	15.3	1.00	17.44	
	ATOM	4542	O	LEU	634	45.597	33.934	14.982	1.00	18.04
	ATOM	4543	N	ARG	635	46.522	35.971	15.135	1.00	19.17
	ATOM	4544	CA	ARG	635	45.809	36.459	13.965	1.00	20.10
5	ATOM	4545	CB	ARG	635	46.057	37.955	13.776	1.00	21.85
	ATOM	4546	CG	ARG	635	45.154	38.812	14.644	1.00	25.01
	ATOM	4547	CD	ARG	635	45.529	40.272	14.572	1.00	29.62
	ATOM	4548	NE	ARG	635	44.548	41.106	15.260	1.00	33.26
	ATOM	4549	CZ	ARG	635	44.745	42.381	15.571	1.00	34.54
10	ATOM	4550	NH1	ARG	635	45.895	42.969	15.259	1.00	35.00
	ATOM	4551	NH2	ARG	635	43.791	43.069	16.185	1.00	36.75
	ATOM	4552	C	ARG	635	46.240	35.688	12.728	1.00	19.78
	ATOM	4553	O	ARG	635	45.404	35.275	11.930	1.00	19.55
	ATOM	4554	N	THR	636	47.544	35.485	12.577	1.00	20.54
15	ATOM	4555	CA	THR	636	48.067	34.745	11.431	1.00	21.78
	ATOM	4556	CB	THR	636	49.604	34.749	11.430	1.00	22.60
	ATOM	4557	OG1	THR	636	50.072	36.101	11.362	1.00	26.06
	ATOM	4558	CG2	THR	636	50.142	33.960	10.241	1.00	23.85
	ATOM	4559	C	THR	636	47.579	33.296	11.463	1.00	20.62
20	ATOM	4560	O	THR	636	47.170	32.747	10.439	1.00	19.63
	ATOM	4561	N	GLU	637	47.619	32.684	12.643	1.00	19.42
	ATOM	4562	CA	GLU	637	47.176	31.299	12.804	1.00	18.86
	ATOM	4563	CB	GLU	637	47.517	30.791	14.211	1.00	19.68
	ATOM	4564	CG	GLU	637	46.993	29.385	14.533	1.00	20.95
25	ATOM	4565	CD	GLU	637	47.704	28.278	13.757	1.00	24.76
	ATOM	4566	OE1	GLU	637	48.584	28.589	12.924	1.00	25.29
	ATOM	4567	OE2	GLU	637	47.379	27.091	13.984	1.00	25.20
	ATOM	4568	C	GLU	637	45.676	31.152	12.553	1.00	17.40
	ATOM	4569	O	GLU	637	45.258	30.279	11.794	1.00	18.84
30	ATOM	4570	N	ASN	638	44.867	32.001	13.183	1.00	17.45
	ATOM	4571	CA	ASN	638	43.416	31.928	13.006	1.00	17.49
	ATOM	4572	CB	ASN	638	42.691	32.889	13.962	1.00	15.50
	ATOM	4573	CG	ASN	638	42.730	32.411	15.408	1.00	16.54
	ATOM	4574	OD1	ASN	638	42.820	31.209	15.674	1.00	15.31
35	ATOM	4575	ND2	ASN	638	42.652	33.348	16.348	1.00	12.94
	ATOM	4576	C	ASN	638	43.015	32.235	11.571	1.00	18.74
	ATOM	4577	O	ASN	638	42.067	31.655	11.039	1.00	16.61
	ATOM	4578	N	GLU	639	43.748	33.147	10.944	1.00	20.32
	ATOM	4579	CA	GLU	639	43.468	33.530	9.566	1.00	22.55
40	ATOM	4580	CB	GLU	639	44.335	34.729	9.178	1.00	23.65
	ATOM	4581	CG	GLU	639	44.290	35.079	7.704	1.00	30.44
	ATOM	4582	CD	GLU	639	45.149	36.284	7.386	1.00	33.49
	ATOM	4583	OE1	GLU	639	44.809	37.389	7.863	1.00	34.20
	ATOM	4584	OE2	GLU	639	46.166	36.122	6.675	1.00	33.48
45	ATOM	4585	C	GLU	639	43.703	32.382	8.581	1.00	22.09
	ATOM	4586	O	GLU	639	42.873	32.118	7.712	1.00	21.43
	ATOM	4587	N	LEU	640	44.825	31.688	8.722	1.00	22.49
	ATOM	4588	CA	LEU	640	45.118	30.600	7.801	1.00	24.32
	ATOM	4589	CB	LEU	640	46.576	30.150	7.956	1.00	25.56
50	ATOM	4590	CG	LEU	640	47.046	29.348	9.162	1.00	26.95
	ATOM	4591	CD1	LEU	640	46.720	27.878	8.949	1.00	27.03
	ATOM	4592	CD2	LEU	640	48.555	29.519	9.316	1.00	29.34
	ATOM	4593	C	LEU	640	44.149	29.426	7.953	1.00	23.29
	ATOM	4594	O	LEU	640	43.985	28.631	7.027	1.00	22.55
55	ATOM	4595	N	HIS	641	43.495	29.327	9.110	1.00	21.91
	ATOM	4596	CA	HIS	641	42.524	28.263	9.339	1.00	22.74
	ATOM	4597	CB	HIS	641	42.622	27.728	10.772	1.00	23.20
	ATOM	4598	CG	HIS	641	43.812	26.856	11.000	1.00	24.45
	ATOM	4599	CD2	HIS	641	44.112	25.623	10.530	1.00	25.66
60	ATOM	4600	ND1	HIS	641	44.894	27.252	11.756	1.00	28.28
	ATOM	4601	CE1	HIS	641	45.810	26.301	11.742	1.00	26.29

	ATOM	4602	NE2	HIS	641	45.360	25.302	9.005	1.00	29.81
	ATOM	4603	C	HIS	641	41.106	28.747	9.071	1.00	23.10
	ATOM	4604	O	HIS	641	40.145	27.988	9.217	1.00	22.01
	ATOM	4605	N	GLY	642	40.986	30.012	8.678	1.00	22.53
5	ATOM	4606	CA	GLY	642	39.683	30.582	8.381	1.00	22.30
	ATOM	4607	C	GLY	642	38.729	30.590	9.561	1.00	23.68
	ATOM	4608	O	GLY	642	37.544	30.277	9.416	1.00	22.74
	ATOM	4609	N	GLU	643	39.233	30.950	10.735	1.00	21.41
	ATOM	4610	CA	GLU	643	38.386	30.981	11.919	1.00	21.09
10	ATOM	4611	CB	GLU	643	39.235	31.103	13.188	1.00	18.57
	ATOM	4612	CG	GLU	643	40.322	30.051	13.336	1.00	18.36
	ATOM	4613	CD	GLU	643	39.780	28.639	13.541	1.00	16.54
	ATOM	4614	OE1	GLU	643	38.545	28.441	13.509	1.00	16.76
	ATOM	4615	OE2	GLU	643	40.604	27.724	13.733	1.00	18.63
15	ATOM	4616	C	GLU	643	37.407	32.147	11.872	1.00	22.46
	ATOM	4617	O	GLU	643	37.727	33.230	11.371	1.00	23.79
	ATOM	4618	N	LYS	644	36.207	31.910	12.386	1.00	21.56
	ATOM	4619	CA	LYS	644	35.180	32.938	12.472	1.00	22.52
	ATOM	4620	CB	LYS	644	33.816	32.367	12.090	1.00	25.95
20	ATOM	4621	CG	LYS	644	32.662	33.335	12.296	1.00	32.66
	ATOM	4622	CD	LYS	644	31.336	32.666	11.974	1.00	37.37
	ATOM	4623	CE	LYS	644	30.164	33.603	12.192	1.00	38.64
	ATOM	4624	NZ	LYS	644	28.883	32.959	11.777	1.00	42.06
	ATOM	4625	C	LYS	644	35.170	33.347	13.940	1.00	22.34
25	ATOM	4626	O	LYS	644	34.633	32.626	14.779	1.00	22.63
	ATOM	4627	N	LEU	645	35.777	34.490	14.250	1.00	21.01
	ATOM	4628	CA	LEU	645	35.846	34.965	15.630	1.00	21.37
	ATOM	4629	CB	LEU	645	36.662	36.251	15.721	1.00	19.95
	ATOM	4630	CG	LEU	645	38.110	36.202	15.233	1.00	21.57
30	ATOM	4631	CD1	LEU	645	38.774	37.542	15.513	1.00	22.47
	ATOM	4632	CD2	LEU	645	38.859	35.084	15.927	1.00	19.75
	ATOM	4633	C	LEU	645	34.470	35.217	16.215	1.00	21.96
	ATOM	4634	O	LEU	645	33.546	35.613	15.508	1.00	20.21
	ATOM	4635	N	GLY	646	34.339	34.987	17.517	1.00	21.25
35	ATOM	4636	CA	GLY	646	33.065	35.214	18.167	1.00	20.02
	ATOM	4637	C	GLY	646	32.117	34.037	18.080	1.00	21.85
	ATOM	4638	O	GLY	646	32.516	32.919	17.748	1.00	19.09
	ATOM	4639	N	TRP	647	30.850	34.302	18.369	1.00	22.45
	ATOM	4640	CA	TRP	647	29.828	33.268	18.356	1.00	28.97
40	ATOM	4641	CB	TRP	647	29.778	32.601	19.734	1.00	23.61
	ATOM	4642	CG	TRP	647	29.902	33.584	20.866	1.00	21.96
	ATOM	4643	CD2	TRP	647	31.119	34.062	21.459	1.00	19.96
	ATOM	4644	CE2	TRP	647	30.761	35.004	22.452	1.00	19.26
	ATOM	4645	CE3	TRP	647	32.480	33.787	21.247	1.00	18.03
45	ATOM	4646	CD1	TRP	647	28.883	34.238	21.507	1.00	20.08
	ATOM	4647	NE1	TRP	647	29.392	35.089	22.460	1.00	19.39
	ATOM	4648	CZ2	TRP	647	31.713	35.675	23.231	1.00	17.35
	ATOM	4649	CZ3	TRP	647	33.428	34.453	22.022	1.00	19.00
	ATOM	4650	CH2	TRP	647	33.037	35.389	23.005	1.00	18.89
50	ATOM	4651	C	TRP	647	28.462	33.843	17.983	1.00	34.48
	ATOM	4652	O	TRP	647	27.676	34.217	18.849	1.00	35.78
	ATOM	4653	N	PRO	648	28.166	33.914	16.675	1.00	41.48
	ATOM	4654	CD	PRO	648	28.952	33.316	15.580	1.00	42.76
	ATOM	4655	CA	PRO	648	26.895	34.443	16.166	1.00	44.45
55	ATOM	4656	CB	PRO	648	27.033	34.263	14.656	1.00	45.15
	ATOM	4657	CG	PRO	648	27.883	33.024	14.556	1.00	44.87
	ATOM	4658	C	PRO	648	25.679	33.707	16.726	1.00	46.65
	ATOM	4659	O	PRO	648	24.898	34.348	17.458	1.00	48.64
	ATOM	4660	OXT	PRO	648	25.526	32.501	16.429	1.00	48.70
60	ATOM	4661	OH2	WAT	705	33.725	46.851	44.246	1.00	15.53
	ATOM	4662	OH2	WAT	706	32.992	26.241	34.112	1.00	12.73

	ATOM	4663	WAT	707	24.332	47.645	41.9	1.00	11.04
	ATOM	4664	OH2 WAT	708	41.493	22.764	37.711	1.00	14.46
	ATOM	4665	OH2 WAT	709	57.554	41.574	37.486	1.00	16.47
	ATOM	4666	OH2 WAT	710	39.385	24.084	39.045	1.00	16.57
5	ATOM	4667	OH2 WAT	711	51.141	36.659	37.992	1.00	13.96
	ATOM	4668	OH2 WAT	712	53.148	51.275	33.059	1.00	23.13
	ATOM	4669	OH2 WAT	713	52.416	34.580	36.566	1.00	18.04
	ATOM	4670	OH2 WAT	714	16.540	45.049	50.781	1.00	15.93
	ATOM	4671	OH2 WAT	715	47.597	46.867	31.105	1.00	15.09
10	ATOM	4672	OH2 WAT	716	33.726	54.353	42.506	1.00	17.24
	ATOM	4673	OH2 WAT	717	33.205	41.739	37.987	1.00	14.76
	ATOM	4674	OH2 WAT	718	37.109	27.771	45.829	1.00	18.94
	ATOM	4675	OH2 WAT	719	17.460	40.837	43.030	1.00	16.41
	ATOM	4676	OH2 WAT	720	40.996	49.596	48.874	1.00	12.40
15	ATOM	4677	OH2 WAT	721	37.232	33.021	29.678	1.00	13.93
	ATOM	4678	OH2 WAT	722	48.355	52.277	48.594	1.00	16.39
	ATOM	4679	OH2 WAT	723	44.253	25.373	17.456	1.00	17.05
	ATOM	4680	OH2 WAT	724	37.616	28.428	16.196	1.00	14.22
	ATOM	4681	OH2 WAT	725	31.807	45.250	42.894	1.00	12.95
20	ATOM	4682	OH2 WAT	726	48.929	40.765	46.120	1.00	16.42
	ATOM	4683	OH2 WAT	727	43.001	28.525	14.577	1.00	19.16
	ATOM	4684	OH2 WAT	728	36.297	33.649	19.024	1.00	16.26
	ATOM	4685	OH2 WAT	729	45.223	39.419	41.235	1.00	17.97
	ATOM	4686	OH2 WAT	730	19.069	49.921	43.313	1.00	22.26
25	ATOM	4687	OH2 WAT	731	18.652	48.396	47.732	1.00	19.58
	ATOM	4688	OH2 WAT	732	16.355	39.332	47.441	1.00	16.61
	ATOM	4689	OH2 WAT	734	27.725	37.511	46.838	1.00	11.65
	ATOM	4690	OH2 WAT	735	43.139	43.055	22.306	1.00	14.35
	ATOM	4691	OH2 WAT	736	23.288	50.618	41.612	1.00	18.93
30	ATOM	4692	OH2 WAT	737	40.575	28.769	39.893	1.00	24.17
	ATOM	4693	OH2 WAT	738	44.624	45.246	56.395	1.00	17.22
	ATOM	4694	OH2 WAT	739	42.886	25.680	33.406	1.00	14.64
	ATOM	4695	OH2 WAT	740	36.434	24.093	32.323	1.00	12.11
	ATOM	4696	OH2 WAT	741	39.736	39.843	47.740	1.00	17.61
35	ATOM	4697	OH2 WAT	742	47.972	45.541	61.312	1.00	27.55
	ATOM	4698	OH2 WAT	743	48.595	42.613	62.331	1.00	19.33
	ATOM	4699	OH2 WAT	744	16.756	44.276	47.836	1.00	17.52
	ATOM	4700	OH2 WAT	745	50.833	52.475	32.781	1.00	22.48
	ATOM	4701	OH2 WAT	746	43.086	51.380	39.452	1.00	19.50
40	ATOM	4702	OH2 WAT	747	43.065	37.312	51.242	1.00	19.15
	ATOM	4703	OH2 WAT	748	36.377	29.551	43.539	1.00	26.33
	ATOM	4704	OH2 WAT	749	31.749	23.341	13.589	1.00	21.93
	ATOM	4705	OH2 WAT	750	51.017	32.405	13.102	1.00	23.70
	ATOM	4706	OH2 WAT	751	23.902	25.063	40.491	1.00	17.23
45	ATOM	4707	OH2 WAT	752	46.245	55.817	48.913	1.00	17.11
	ATOM	4708	OH2 WAT	753	17.325	38.625	44.796	1.00	17.92
	ATOM	4709	OH2 WAT	754	30.477	54.512	37.203	1.00	19.17
	ATOM	4710	OH2 WAT	755	30.153	29.098	39.015	1.00	13.90
	ATOM	4711	OH2 WAT	756	40.602	56.391	45.574	1.00	29.30
50	ATOM	4712	OH2 WAT	757	48.469	46.405	58.796	1.00	20.34
	ATOM	4713	OH2 WAT	758	23.341	22.303	39.374	1.00	19.80
	ATOM	4714	OH2 WAT	759	39.109	29.949	42.113	1.00	17.81
	ATOM	4715	OH2 WAT	760	41.617	55.292	34.623	1.00	19.28
	ATOM	4716	OH2 WAT	761	50.433	32.980	35.395	1.00	27.78
55	ATOM	4717	OH2 WAT	762	55.349	39.853	51.988	1.00	21.56
	ATOM	4718	OH2 WAT	763	17.829	47.302	45.052	1.00	19.63
	ATOM	4719	OH2 WAT	764	41.437	43.591	47.417	1.00	17.87
	ATOM	4720	OH2 WAT	765	31.453	48.234	33.459	1.00	20.09
	ATOM	4721	OH2 WAT	766	35.895	29.226	13.339	1.00	19.08
60	ATOM	4722	OH2 WAT	767	42.129	47.247	49.577	1.00	21.96
	ATOM	4723	OH2 WAT	768	39.938	19.646	28.365	1.00	16.90

	ATOM	4724	OH2	WAT	770	53.052	28.858	53.534	1.00	29.07
	ATOM	4725	OH2	WAT	771	39.487	58.074	40.481	1.00	19.31
	ATOM	4726	OH2	WAT	772	34.677	20.856	49.093	1.00	29.57
	ATOM	4727	OH2	WAT	773	17.419	31.215	38.280	1.00	27.38
5	ATOM	4728	OH2	WAT	774	44.543	23.939	14.013	1.00	24.17
	ATOM	4729	OH2	WAT	775	31.307	56.780	49.243	1.00	27.95
	ATOM	4730	OH2	WAT	776	46.870	56.616	46.429	1.00	26.71
	ATOM	4731	OH2	WAT	777	43.022	58.359	37.108	1.00	24.23
	ATOM	4732	OH2	WAT	778	40.838	33.568	7.092	1.00	29.87
10	ATOM	4733	OH2	WAT	779	35.280	52.569	73.408	1.00	30.56
	ATOM	4734	OH2	WAT	780	14.847	39.443	36.394	1.00	22.09
	ATOM	4735	OH2	WAT	781	39.543	32.050	52.976	1.00	16.43
	ATOM	4736	OH2	WAT	782	27.658	50.202	53.322	1.00	36.66
	ATOM	4737	OH2	WAT	783	49.665	26.157	11.610	1.00	31.59
15	ATOM	4738	OH2	WAT	784	44.790	26.439	15.055	1.00	18.95
	ATOM	4739	OH2	WAT	785	57.915	38.932	52.077	1.00	23.38
	ATOM	4740	OH2	WAT	786	34.219	51.188	61.855	1.00	27.39
	ATOM	4741	OH2	WAT	788	43.520	51.469	28.053	1.00	23.51
	ATOM	4742	OH2	WAT	789	20.741	25.871	29.764	1.00	25.31
20	ATOM	4743	OH2	WAT	790	31.996	32.524	15.060	1.00	27.33
	ATOM	4744	OH2	WAT	791	50.065	48.521	23.797	1.00	22.69
	ATOM	4745	OH2	WAT	793	40.065	53.867	45.877	1.00	28.99
	ATOM	4746	OH2	WAT	794	27.500	14.226	27.489	1.00	25.41
	ATOM	4747	OH2	WAT	795	40.088	34.807	11.689	1.00	31.73
25	ATOM	4748	OH2	WAT	796	39.102	11.125	33.545	1.00	21.19
	ATOM	4749	OH2	WAT	797	27.472	21.519	51.557	1.00	21.90
	ATOM	4750	OH2	WAT	798	66.482	40.320	37.672	1.00	26.30
	ATOM	4751	OH2	WAT	799	22.957	49.917	38.951	1.00	28.18
	ATOM	4752	OH2	WAT	800	26.175	37.519	64.945	1.00	35.81
30	ATOM	4753	OH2	WAT	801	34.181	10.599	28.257	1.00	20.76
	ATOM	4754	OH2	WAT	802	59.869	33.554	44.206	1.00	24.54
	ATOM	4755	OH2	WAT	803	38.591	20.686	31.734	1.00	19.19
	ATOM	4756	OH2	WAT	804	40.781	21.352	12.247	1.00	34.63
	ATOM	4757	OH2	WAT	805	56.133	41.425	25.091	1.00	22.31
35	ATOM	4758	OH2	WAT	806	37.118	27.351	50.493	1.00	21.88
	ATOM	4759	OH2	WAT	807	42.654	46.736	21.378	1.00	21.89
	ATOM	4760	OH2	WAT	808	35.150	28.150	10.834	1.00	28.45
	ATOM	4761	OH2	WAT	809	29.291	19.889	23.346	1.00	24.18
	ATOM	4762	OH2	WAT	810	52.883	51.977	57.763	1.00	29.06
40	ATOM	4763	OH2	WAT	811	53.403	37.618	61.414	1.00	27.12
	ATOM	4764	OH2	WAT	812	11.989	35.114	47.917	1.00	33.35
	ATOM	4765	OH2	WAT	813	25.177	49.091	37.779	1.00	23.88
	ATOM	4766	OH2	WAT	814	43.929	19.517	20.685	1.00	25.16
	ATOM	4767	OH2	WAT	815	36.157	15.297	14.633	1.00	24.52
45	ATOM	4768	OH2	WAT	816	35.907	12.552	25.672	1.00	25.39
	ATOM	4769	OH2	WAT	817	39.592	55.524	36.450	1.00	25.79
	ATOM	4770	OH2	WAT	818	62.649	34.290	30.290	1.00	24.83
	ATOM	4771	OH2	WAT	819	19.911	55.424	50.600	1.00	37.80
	ATOM	4772	OH2	WAT	820	50.799	29.874	12.353	1.00	25.54
50	ATOM	4773	OH2	WAT	821	27.864	56.624	70.138	1.00	27.58
	ATOM	4774	OH2	WAT	823	27.817	17.957	50.119	1.00	32.04
	ATOM	4775	OH2	WAT	824	56.121	37.459	32.732	1.00	21.41
	ATOM	4776	OH2	WAT	825	9.453	31.180	47.871	1.00	51.79
	ATOM	4777	OH2	WAT	826	41.647	54.559	62.566	1.00	39.79
55	ATOM	4778	OH2	WAT	827	50.893	18.450	23.970	1.00	27.60
	ATOM	4779	OH2	WAT	828	26.079	14.620	12.464	1.00	24.55
	ATOM	4780	OH2	WAT	829	69.963	44.562	41.439	1.00	32.79
	ATOM	4781	OH2	WAT	830	56.486	22.481	16.758	1.00	35.62
	ATOM	4782	OH2	WAT	831	26.101	20.243	49.585	1.00	24.90
60	ATOM	4783	OH2	WAT	832	16.729	33.274	50.986	1.00	24.98
	ATOM	4784	OH2	WAT	833	21.501	54.137	59.417	1.00	23.27

	ATOM	4785	OH2	WAT	834	47.542	53.259	69.27	1.00	45.51
	ATOM	4786	OH2	WAT	836	49.479	39.080	12.500	1.00	30.28
	ATOM	4787	OH2	WAT	838	42.825	25.879	37.780	1.00	23.21
	ATOM	4788	OH2	WAT	839	50.943	24.947	57.867	1.00	32.14
5	ATOM	4789	OH2	WAT	840	54.743	56.961	50.478	1.00	26.75
	ATOM	4790	OH2	WAT	841	40.544	53.741	32.431	1.00	34.46
	ATOM	4791	OH2	WAT	842	26.547	47.649	53.571	1.00	39.97
	ATOM	4792	OH2	WAT	843	37.195	32.835	54.383	1.00	28.68
	ATOM	4793	OH2	WAT	844	58.053	39.110	31.973	1.00	18.62
10	ATOM	4794	OH2	WAT	845	18.264	24.599	44.498	1.00	27.65
	ATOM	4795	OH2	WAT	847	13.854	29.610	37.456	1.00	44.84
	ATOM	4796	OH2	WAT	849	22.552	38.833	31.917	1.00	48.29
	ATOM	4797	OH2	WAT	850	35.645	59.479	37.510	1.00	31.45
	ATOM	4798	OH2	WAT	851	24.548	59.962	64.794	1.00	38.37
15	ATOM	4799	OH2	WAT	852	30.633	55.275	34.413	1.00	26.28
	ATOM	4800	OH2	WAT	853	39.272	27.243	44.281	1.00	44.92
	ATOM	4801	OH2	WAT	854	32.053	46.154	71.549	1.00	34.74
	ATOM	4802	OH2	WAT	855	48.612	24.905	14.847	1.00	36.12
	ATOM	4803	OH2	WAT	857	18.696	30.214	40.372	1.00	32.39
20	ATOM	4804	OH2	WAT	858	67.928	43.317	39.467	1.00	25.41
	ATOM	4805	OH2	WAT	859	29.220	64.769	57.769	1.00	33.69
	ATOM	4806	OH2	WAT	860	50.268	24.002	37.829	1.00	31.48
	ATOM	4807	OH2	WAT	861	50.197	23.766	16.468	1.00	47.21
	ATOM	4808	OH2	WAT	862	50.752	18.550	46.573	1.00	33.31
25	ATOM	4809	OH2	WAT	863	54.737	36.999	16.598	1.00	28.84
	ATOM	4810	OH2	WAT	864	23.466	24.199	53.649	1.00	29.72
	ATOM	4811	OH2	WAT	865	33.404	55.021	25.847	1.00	52.41
	ATOM	4812	OH2	WAT	866	42.687	31.048	44.149	1.00	40.21
	ATOM	4813	OH2	WAT	867	28.448	42.954	54.380	1.00	36.53
30	ATOM	4814	OH2	WAT	868	14.997	43.707	34.454	1.00	43.03
	ATOM	4815	OH2	WAT	869	14.328	39.153	57.579	1.00	40.69
	ATOM	4816	OH2	WAT	870	57.378	37.209	64.736	1.00	28.61
	ATOM	4817	OH2	WAT	871	20.536	32.124	29.526	1.00	31.13
	ATOM	4818	OH2	WAT	872	52.129	50.355	27.209	1.00	31.95
35	ATOM	4819	OH2	WAT	873	51.809	35.631	62.337	1.00	31.87
	ATOM	4820	OH2	WAT	874	47.029	21.316	50.899	1.00	28.63
	ATOM	4821	OH2	WAT	875	29.328	44.418	56.243	1.00	29.76
	ATOM	4822	OH2	WAT	876	40.553	19.067	31.054	1.00	31.19
	ATOM	4823	OH2	WAT	877	56.608	42.974	23.109	1.00	36.47
40	ATOM	4824	OH2	WAT	878	33.944	18.283	53.032	1.00	48.79
	ATOM	4825	OH2	WAT	879	27.295	18.819	26.051	1.00	23.88
	ATOM	4826	OH2	WAT	880	62.721	54.186	39.777	1.00	38.87
	ATOM	4827	OH2	WAT	881	35.611	9.588	50.038	1.00	41.90
	ATOM	4828	OH2	WAT	882	38.082	58.167	33.104	1.00	35.67
45	ATOM	4829	OH2	WAT	883	20.479	20.811	35.650	1.00	28.10
	ATOM	4830	OH2	WAT	884	64.071	48.661	47.710	1.00	36.23
	ATOM	4831	OH2	WAT	885	62.169	33.114	54.016	1.00	38.38
	ATOM	4832	OH2	WAT	886	46.247	15.458	31.504	1.00	29.44
	ATOM	4833	OH2	WAT	887	15.161	50.744	53.893	1.00	46.81
50	ATOM	4834	OH2	WAT	888	21.461	24.555	51.822	1.00	33.72
	ATOM	4835	OH2	WAT	889	39.805	19.953	14.067	1.00	34.19
	ATOM	4836	OH2	WAT	890	44.630	68.730	56.107	1.00	44.36
	ATOM	4837	OH2	WAT	891	47.554	30.392	39.434	1.00	32.91
	ATOM	4838	OH2	WAT	892	32.135	20.873	14.262	1.00	29.57
55	ATOM	4839	OH2	WAT	893	69.474	42.046	47.848	1.00	40.45
	ATOM	4840	OH2	WAT	894	23.764	15.417	41.216	1.00	45.57
	ATOM	4841	OH2	WAT	895	30.804	11.274	25.353	1.00	36.15
	ATOM	4842	OH2	WAT	896	42.686	40.690	57.070	1.00	26.52
	ATOM	4843	OH2	WAT	898	41.447	36.486	13.521	1.00	40.39
60	ATOM	4844	OH2	WAT	899	38.960	38.628	60.048	1.00	40.06
	ATOM	4845	OH2	WAT	900	41.026	24.976	9.369	1.00	38.69

	ATOM	4846	OH2	WAT	902	55.833	48.041	27.058	1.00	38.88
	ATOM	4847	OH2	WAT	903	33.909	34.365	58.131	1.00	39.46
	ATOM	4848	OH2	WAT	904	56.604	58.656	39.499	1.00	34.67
	ATOM	4849	OH2	WAT	905	57.413	45.071	24.624	1.00	33.81
5	ATOM	4850	OH2	WAT	906	68.047	30.945	34.093	1.00	36.91
	ATOM	4851	OH2	WAT	907	17.540	52.182	46.933	1.00	26.43
	ATOM	4852	OH2	WAT	908	35.513	31.206	66.336	1.00	25.73
	ATOM	4853	OH2	WAT	910	62.045	46.674	53.517	1.00	33.21
	ATOM	4854	OH2	WAT	911	46.903	38.348	67.243	1.00	32.49
10	ATOM	4855	OH2	WAT	912	60.188	33.756	26.674	1.00	37.96
	ATOM	4856	OH2	WAT	913	17.538	36.873	63.382	1.00	49.19
	ATOM	4857	OH2	WAT	914	23.983	36.615	25.955	1.00	28.20
	ATOM	4858	OH2	WAT	915	15.876	30.521	47.253	1.00	31.86
	ATOM	4859	OH2	WAT	916	23.539	62.135	63.215	1.00	37.75
15	ATOM	4860	OH2	WAT	917	50.546	48.552	64.034	1.00	38.09
	ATOM	4861	OH2	WAT	918	64.968	41.202	32.910	1.00	30.16
	ATOM	4862	OH2	WAT	919	47.342	55.129	71.525	1.00	41.35
	ATOM	4863	OH2	WAT	920	15.582	44.034	65.703	1.00	31.07
	ATOM	4864	OH2	WAT	921	37.858	50.757	24.526	1.00	31.62
20	ATOM	4865	OH2	WAT	922	37.372	23.617	9.556	1.00	39.44
	ATOM	4866	OH2	WAT	924	24.489	15.323	15.117	1.00	46.62
	ATOM	4867	OH2	WAT	925	22.412	16.803	37.659	1.00	43.70
	ATOM	4868	OH2	WAT	926	29.507	54.047	43.644	1.00	35.52
	ATOM	4869	OH2	WAT	927	60.554	35.356	56.976	1.00	42.99
25	ATOM	4870	OH2	WAT	929	20.021	33.589	59.004	1.00	30.36
	ATOM	4871	OH2	WAT	930	19.473	19.176	31.910	1.00	31.54
	ATOM	4872	OH2	WAT	931	48.046	22.565	58.100	1.00	30.58
	ATOM	4873	OH2	WAT	932	43.806	63.606	53.022	1.00	40.90
	ATOM	4874	OH2	WAT	933	33.913	20.122	11.496	1.00	24.77
30	ATOM	4875	OH2	WAT	934	49.430	59.955	52.495	1.00	37.32
	ATOM	4876	OH2	WAT	935	63.827	32.863	45.133	1.00	49.52
	ATOM	4877	OH2	WAT	936	37.964	21.411	49.414	1.00	30.06
	ATOM	4878	OH2	WAT	937	27.725	14.522	39.223	1.00	39.88
	ATOM	4879	OH2	WAT	938	15.164	38.822	61.336	1.00	46.35
35	ATOM	4880	OH2	WAT	939	59.040	42.353	59.062	1.00	33.96
	ATOM	4881	OH2	WAT	940	47.109	42.149	69.895	1.00	45.88
	ATOM	4882	OH2	WAT	941	26.653	32.630	69.093	1.00	36.31
	ATOM	4883	OH2	WAT	942	28.206	17.559	22.902	1.00	32.76
	ATOM	4884	OH2	WAT	943	26.970	50.327	70.960	1.00	48.12
40	ATOM	4885	OH2	WAT	944	64.060	23.004	42.589	1.00	32.90
	ATOM	4886	OH2	WAT	945	47.727	33.598	7.895	1.00	35.65
	ATOM	4887	OH2	WAT	946	34.742	23.791	49.020	1.00	25.74
	ATOM	4888	OH2	WAT	947	47.101	46.897	68.781	1.00	45.45
	ATOM	4889	OH2	WAT	948	41.870	11.724	30.722	1.00	27.02
45	ATOM	4890	OH2	WAT	949	34.529	49.050	63.729	1.00	32.80
	ATOM	4891	OH2	WAT	950	38.408	61.853	51.628	1.00	49.43
	ATOM	4892	OH2	WAT	951	44.952	50.165	71.454	1.00	36.16
	ATOM	4893	OH2	WAT	952	46.362	23.481	42.021	1.00	38.59
	ATOM	4894	OH2	WAT	953	22.997	57.578	62.984	1.00	48.56
50	ATOM	4895	OH2	WAT	954	53.705	20.324	34.584	1.00	46.72
	ATOM	4896	OH2	WAT	955	39.632	64.246	53.049	1.00	38.41
	ATOM	4897	OH2	WAT	956	20.296	21.770	47.578	1.00	38.44
	ATOM	4898	OH2	WAT	957	70.708	44.445	44.502	1.00	35.87
	ATOM	4899	OH2	WAT	958	13.567	22.992	35.251	1.00	36.22
55	ATOM	4900	OH2	WAT	959	61.462	37.840	59.404	1.00	32.38
	ATOM	4901	OH2	WAT	960	70.605	49.268	42.736	1.00	49.49
	ATOM	4902	OH2	WAT	961	27.001	13.873	45.582	1.00	34.49
	ATOM	4903	OH2	WAT	962	40.837	53.265	28.588	1.00	34.92
	ATOM	4904	OH2	WAT	963	41.440	40.204	15.200	1.00	25.63
60	ATOM	4905	OH2	WAT	964	47.029	18.253	59.807	1.00	47.20
	ATOM	4906	OH2	WAT	965	30.122	45.125	27.224	1.00	41.19

	ATOM	4907	OH2	WAT	966	70.354	22.884	32.354	1.00	45.44
	ATOM	4908	OH2	WAT	967	54.548	57.173	32.638	1.00	33.64
	ATOM	4909	OH2	WAT	968	47.786	18.173	53.594	1.00	33.24
5	ATOM	4910	OH2	WAT	969	38.400	16.790	14.876	1.00	37.75
	ATOM	4911	OH2	WAT	970	28.970	12.153	32.723	1.00	24.55
	ATOM	4912	OH2	WAT	971	28.874	35.834	60.109	1.00	39.03
	ATOM	4913	OH2	WAT	972	47.546	23.630	12.714	1.00	51.51
	ATOM	4914	OH2	WAT	973	40.454	49.523	57.495	1.00	35.41
10	ATOM	4915	OH2	WAT	974	48.210	48.061	65.137	1.00	47.07
	ATOM	4916	OH2	WAT	975	37.958	26.212	47.790	1.00	44.98
	ATOM	4917	OH2	WAT	977	37.233	24.170	51.843	1.00	33.85
	ATOM	4918	OH2	WAT	978	33.749	56.149	48.597	1.00	30.36
	ATOM	4919	OH2	WAT	979	48.361	43.396	21.748	1.00	40.73
15	ATOM	4920	OH2	WAT	980	47.355	49.826	23.205	1.00	38.07
	ATOM	4921	OH2	WAT	982	37.732	7.064	33.535	1.00	48.68
	ATOM	4922	OH2	WAT	984	67.639	44.821	28.942	1.00	56.38
	ATOM	4923	OH2	WAT	985	65.770	35.555	35.108	1.00	50.64
	ATOM	4924	OH2	WAT	986	30.693	20.715	65.019	1.00	32.06
	ATOM	4925	OH2	WAT	987	27.053	36.974	22.607	1.00	38.10
20	ATOM	4926	OH2	WAT	988	19.163	25.611	48.320	1.00	25.80
	ATOM	4927	OH2	WAT	989	48.005	58.792	30.965	1.00	45.93
	ATOM	4928	OH2	WAT	990	33.951	58.019	31.506	1.00	26.89
	ATOM	4929	OH2	WAT	991	60.149	48.327	52.415	1.00	42.30
25	ATOM	4930	OH2	WAT	993	64.162	36.713	52.481	1.00	35.08
	ATOM	4931	OH2	WAT	996	36.217	29.075	7.223	1.00	43.08
	ATOM	4932	OH2	WAT	997	49.801	51.068	30.170	1.00	33.40
	ATOM	4933	OH2	WAT	998	11.053	37.371	34.418	1.00	31.32
	ATOM	4934	OH2	WAT	999	44.601	23.087	39.455	1.00	47.23
30	ATOM	4935	OH2	WAT	1000	50.726	38.377	68.058	1.00	47.19
	ATOM	4936	OH2	WAT	1002	60.312	35.422	29.042	1.00	30.62
	ATOM	4937	OH2	WAT	1003	20.479	31.153	57.519	1.00	37.20
	ATOM	4938	OH2	WAT	1004	20.277	29.204	31.044	1.00	31.69
	ATOM	4939	OH2	WAT	1005	20.943	52.359	61.162	1.00	36.05
35	ATOM	4940	OH2	WAT	1006	44.819	20.699	43.312	1.00	49.10
	ATOM	4941	OH2	WAT	1008	34.011	36.177	53.463	1.00	33.13
	ATOM	4942	OH2	WAT	1010	55.158	53.328	33.223	1.00	28.59
	ATOM	4943	OH2	WAT	1012	55.826	39.714	64.610	1.00	34.66
	ATOM	4944	OH2	WAT	1014	66.327	38.147	49.052	1.00	26.67
	ATOM	4945	OH2	WAT	1017	30.997	50.156	52.375	1.00	35.44
40	ATOM	4946	OH2	WAT	1020	13.998	44.255	63.276	1.00	37.79
	ATOM	4947	OH2	WAT	1021	54.863	22.503	53.859	1.00	37.14
	ATOM	4948	OH2	WAT	1022	17.119	28.668	38.825	1.00	36.01
	ATOM	4949	OH2	WAT	1024	36.501	20.637	51.705	1.00	45.60
45	ATOM	4950	OH2	WAT	1025	48.817	20.944	30.325	1.00	27.83
	ATOM	4951	OH2	WAT	1027	14.381	45.600	52.809	1.00	44.10
	ATOM	4952	OH2	WAT	1032	35.525	5.074	31.109	1.00	41.37
	ATOM	4953	OH2	WAT	1033	29.779	34.319	53.582	1.00	28.70
	ATOM	4954	OH2	WAT	1034	47.328	38.726	9.716	1.00	49.35
50	ATOM	4955	OH2	WAT	1035	44.854	34.535	67.215	1.00	48.50
	ATOM	4956	OH2	WAT	1037	26.055	45.081	34.982	1.00	35.09
	ATOM	4957	OH2	WAT	1040	11.141	37.010	54.220	1.00	43.27
	ATOM	4958	OH2	WAT	1041	29.634	41.348	52.346	1.00	40.29
	ATOM	4959	OH2	WAT	1042	36.989	26.821	9.501	1.00	47.61
55	ATOM	4960	OH2	WAT	1043	57.297	28.427	29.996	1.00	42.70
	ATOM	4961	OH2	WAT	1044	15.339	49.780	56.964	1.00	42.68
	ATOM	4962	OH2	WAT	1045	46.946	51.783	70.089	1.00	52.87
	ATOM	4963	OH2	WAT	1047	43.735	26.720	48.439	1.00	32.56
	ATOM	4964	OH2	WAT	1049	59.084	48.736	30.360	1.00	45.92
60	ATOM	4965	OH2	WAT	1051	47.217	61.277	55.003	1.00	50.60
	ATOM	4966	OH2	WAT	1052	42.854	26.577	64.396	1.00	40.89
	ATOM	4967	OH2	WAT	1053	56.373	17.507	47.814	1.00	44.29

	ATOM	4968	OH2	WAT	1056	58.449	30.554	7.214	1.00	46.73
	ATOM	4969	OH2	WAT	1057	25.498	11.492	25.912	1.00	40.95
	ATOM	4970	OH2	WAT	1058	44.975	29.368	39.403	1.00	43.65
	ATOM	4971	OH2	WAT	1059	25.317	25.265	57.780	1.00	47.77
5	ATOM	4972	OH2	WAT	1061	28.989	59.107	55.188	1.00	46.96
	ATOM	4973	OH2	WAT	1062	62.109	32.898	43.133	1.00	29.76
	ATOM	4974	OH2	WAT	1063	68.950	47.081	42.243	1.00	32.59
	ATOM	4975	OH2	WAT	1066	53.065	54.350	56.726	1.00	53.35
	ATOM	4976	OH2	WAT	1068	44.519	16.873	20.860	1.00	43.15
10	ATOM	4977	OH2	WAT	1070	45.839	26.154	61.550	1.00	36.80
	ATOM	4978	OH2	WAT	1072	36.197	36.508	12.204	1.00	33.71
	ATOM	4979	OH2	WAT	1073	35.351	41.501	68.026	1.00	45.11
	ATOM	4980	OH2	WAT	1074	65.633	34.803	51.451	1.00	38.53
	ATOM	4981	OH2	WAT	1078	41.335	38.420	54.710	0.50	29.72
15	ATOM	4982	OH2	WAT	1079	29.512	38.685	22.833	1.00	39.63
	ATOM	4983	OH2	WAT	1080	14.118	37.523	50.894	1.00	39.63
	ATOM	4984	OH2	WAT	1081	48.556	54.366	25.635	1.00	42.49
	ATOM	4985	OH2	WAT	1082	40.975	25.862	40.806	1.00	24.48
	ATOM	4986	OH2	WAT	1083	40.345	57.934	37.750	1.00	22.44
20	ATOM	4987	OH2	WAT	1084	54.691	59.362	48.731	1.00	33.75
	ATOM	4988	OH2	WAT	1085	53.736	57.789	52.852	1.00	40.58
	ATOM	4989	OH2	WAT	1086	15.708	33.122	54.732	1.00	44.11
	ATOM	4990	OH2	WAT	1087	22.243	32.265	27.402	1.00	38.80
	ATOM	4991	OH2	WAT	1088	47.611	17.171	32.905	1.00	43.63
25	ATOM	4992	OH2	WAT	1089	58.379	48.121	27.949	1.00	43.58
	ATOM	4993	OH2	WAT	1092	57.488	59.756	41.894	1.00	54.98
	ATOM	4994	OH2	WAT	1093	37.216	31.175	68.418	1.00	28.64
	ATOM	4995	OH2	WAT	1094	37.762	33.656	69.811	1.00	40.47
	ATOM	4996	OH2	WAT	1095	65.445	43.712	34.681	1.00	47.01
30	ATOM	4997	OH2	WAT	1097	28.164	21.093	19.000	1.00	34.17
	ATOM	4998	OH2	WAT	1098	18.673	33.165	61.660	1.00	40.84
	ATOM	4999	OH2	WAT	1100	51.193	61.127	51.030	1.00	39.94
	ATOM	5000	OH2	WAT	1101	56.432	43.982	59.555	1.00	39.42
	ATOM	5001	OH2	WAT	1102	56.968	41.831	63.701	1.00	42.73
35	ATOM	5002	OH2	WAT	1103	34.405	49.957	71.786	1.00	35.15
	ATOM	5003	OH2	WAT	1104	41.241	9.964	32.536	1.00	31.00
	ATOM	5004	OH2	WAT	1105	21.105	21.857	50.569	1.00	43.38
	ATOM	5005	OH2	WAT	1106	23.670	20.267	50.750	1.00	41.28
	ATOM	5006	OH2	WAT	1108	29.571	9.657	34.297	1.00	39.24
40	ATOM	5007	OH2	WAT	1109	27.460	9.067	36.007	1.00	35.51
	ATOM	5008	OH2	WAT	1111	24.692	47.272	35.502	1.00	33.10
	ATOM	5009	OH2	WAT	1113	29.462	58.167	41.963	1.00	39.41
	ATOM	5010	OH2	WAT	1115	26.304	58.757	54.952	1.00	54.54
	ATOM	5011	OH2	WAT	1116	22.934	60.561	60.251	1.00	49.35
45	ATOM	5012	OH2	WAT	1117	39.244	37.381	55.807	1.00	42.76
	ATOM	5013	OH2	WAT	1119	37.428	43.614	61.340	1.00	41.53
	ATOM	5014	OH2	WAT	1121	17.907	30.515	55.600	1.00	52.02
	ATOM	5015	OH2	WAT	1122	33.636	10.725	25.760	1.00	26.11
	ATOM	5016	OH2	WAT	1123	37.687	60.192	39.575	1.00	27.92
50	ATOM	5017	OH2	WAT	1124	40.750	44.964	49.691	1.00	25.17
	ATOM	5018	OH2	WAT	1125	70.584	38.077	47.755	1.00	37.02
	ATOM	5019	OH2	WAT	1126	15.603	41.927	47.692	1.00	28.52
	ATOM	5020	OH2	WAT	1127	25.206	43.505	32.164	1.00	33.23
	ATOM	5021	OH2	WAT	1128	26.442	21.223	54.177	1.00	26.91
55	ATOM	5022	OH2	WAT	1130	42.766	41.142	51.475	1.00	46.99
	ATOM	5023	OH2	WAT	1131	43.109	61.103	37.679	1.00	41.65
	ATOM	5024	OH2	WAT	1132	14.570	30.169	45.086	1.00	42.30
	ATOM	5025	OH2	WAT	1133	34.157	38.583	24.573	1.00	28.21
	ATOM	5026	OH2	WAT	1135	35.943	44.155	50.435	1.00	35.21
60	ATOM	5027	OH2	WAT	1137	15.347	36.178	62.387	1.00	48.01
	ATOM	5028	OH2	WAT	1142	30.780	45.800	61.426	1.00	46.24

	ATOM	5029	OH2	WAT	1144	56.000	49.811	57.112	1.00	33.19
	ATOM	5030	OH2	WAT	1145	50.931	47.015	21.718	1.00	41.76
	ATOM	5031	OH2	WAT	1148	41.181	13.664	41.675	1.00	36.85
	ATOM	5032	OH2	WAT	1149	26.829	13.900	42.000	1.00	51.60
5	ATOM	5033	OH2	WAT	1150	38.428	50.689	49.680	1.00	38.37
	ATOM	5034	OH2	WAT	1151	13.307	43.102	37.676	1.00	40.57
	ATOM	5035	OH2	WAT	1153	32.376	39.513	22.416	1.00	42.97
	ATOM	5036	OH2	WAT	1155	14.863	50.906	47.090	1.00	49.79
	ATOM	5037	OH2	WAT	1156	39.040	11.571	36.195	1.00	42.49
10	ATOM	5038	OH2	WAT	1157	55.760	18.990	54.253	1.00	46.82
	ATOM	5039	OH2	WAT	1159	29.811	44.316	51.775	1.00	29.84
	ATOM	5040	OH2	WAT	1160	26.254	30.191	18.160	1.00	47.30
	ATOM	5041	OH2	WAT	1163	50.589	53.935	30.727	1.00	41.87
	ATOM	5042	OH2	WAT	1164	26.778	17.598	17.107	1.00	39.40
15	ATOM	5043	OH2	WAT	1166	57.293	56.491	51.361	1.00	36.42
	ATOM	5044	OH2	WAT	1167	55.900	43.483	62.013	1.00	33.17
	ATOM	5045	OH2	WAT	1170	45.416	56.601	68.328	1.00	39.64
	ATOM	5046	OH2	WAT	1171	45.090	53.796	27.563	1.00	44.12
	ATOM	5047	OH2	WAT	1172	25.950	27.760	17.747	1.00	47.76
20	ATOM	5048	OH2	WAT	1174	21.716	34.736	25.915	1.00	39.70
	ATOM	5049	OH2	WAT	1177	28.580	48.024	33.877	1.00	34.88
	ATOM	5050	OH2	WAT	1178	45.395	19.823	49.333	1.00	48.96
	ATOM	5051	OH2	WAT	1180	66.122	32.218	43.068	1.00	46.26
	ATOM	5052	OH2	WAT	1181	61.892	29.586	16.389	1.00	40.21
25	ATOM	5053	OH2	WAT	1183	15.358	27.450	47.492	1.00	49.59
	ATOM	5054	OH2	WAT	1184	13.556	47.284	49.126	1.00	53.43
	ATOM	5055	OH2	WAT	1185	47.096	19.628	33.301	1.00	39.63
	ATOM	5056	OH2	WAT	1186	15.740	33.792	31.449	1.00	55.70
	ATOM	5057	OH2	WAT	1189	28.976	26.719	60.440	1.00	42.03
30	ATOM	5058	OH2	WAT	1190	18.223	23.257	49.730	1.00	49.11
	ATOM	5059	OH2	WAT	1191	51.509	56.989	54.192	1.00	38.61
	ATOM	5060	OH2	WAT	1193	43.560	45.405	17.563	1.00	36.62
	ATOM	5061	OH2	WAT	1204	30.518	43.634	25.079	1.00	47.04
	ATOM	5062	OH2	WAT	1208	21.476	24.864	27.340	1.00	34.36
35	ATOM	5063	OH2	WAT	1209	17.760	41.993	33.261	1.00	55.66
	ATOM	5064	OH2	WAT	1212	46.798	63.405	52.749	1.00	51.44
	ATOM	5065	OH2	WAT	1219	34.617	51.206	58.460	1.00	49.36
	ATOM	5066	OH2	WAT	1220	24.104	41.582	29.552	1.00	45.40
	ATOM	5067	OH2	WAT	1223	23.863	21.524	53.424	1.00	45.78
40	ATOM	5068	OH2	WAT	1224	50.956	18.524	42.578	1.00	40.01
	ATOM	5069	OH2	WAT	1226	49.969	19.920	49.613	1.00	44.84
	ATOM	5070	OH2	WAT	1229	49.709	30.628	33.104	1.00	41.21
	ATOM	5071	OH2	WAT	1230	31.240	38.559	20.375	1.00	47.94
	ATOM	5072	OH2	WAT	1232	23.399	22.619	27.338	1.00	34.56
45	ATOM	5073	OH2	WAT	1233	48.110	31.839	37.064	1.00	42.29
	ATOM	5074	OH2	WAT	1236	47.248	45.427	20.268	1.00	40.26
	ATOM	5075	OH2	WAT	1237	19.590	16.455	39.634	1.00	45.25
	ATOM	5076	OH2	WAT	1239	40.962	60.463	74.404	1.00	45.01
	ATOM	5077	OH2	WAT	1243	46.981	33.979	68.748	1.00	49.24
50	ATOM	5078	OH2	WAT	1244	61.241	43.880	58.980	1.00	42.97
	ATOM	5079	OH2	WAT	1250	35.115	51.055	23.889	1.00	51.05
	ATOM	5080	OH2	WAT	1255	12.571	50.793	52.116	0.50	33.17
	ATOM	5081	OH2	WAT	1266	25.841	9.552	44.564	1.00	55.17
	ATOM	5082	OH2	WAT	1268	61.336	50.541	51.337	1.00	45.61
55	ATOM	5083	OH2	WAT	1273	23.939	29.659	26.509	1.00	42.88
	ATOM	5084	OH2	WAT	1275	59.410	55.437	44.599	1.00	42.16
	ATOM	5085	OH2	WAT	1278	64.290	43.553	53.436	1.00	38.01
	ATOM	5086	OH2	WAT	1279	36.463	61.861	41.741	1.00	31.97
	ATOM	5087	OH2	WAT	1282	37.884	28.719	70.368	1.00	50.75
60	ATOM	5088	OH2	WAT	1286	21.758	53.622	63.516	1.00	46.95
	ATOM	5089	OH2	WAT	1288	49.866	23.754	32.094	1.00	47.08

	ATOM	5090	OH2	WAT	1289	46.816	19.829	30.612	1.00	41.12
	ATOM	5091	OH2	WAT	1294	41.690	12.743	36.520	1.00	45.23
	ATOM	5092	OH2	WAT	1302	47.382	23.700	60.586	1.00	42.72
	ATOM	5093	OH2	WAT	1303	65.406	53.318	38.129	1.00	42.46
5	ATOM	5094	OH2	WAT	1304	16.963	19.384	30.420	1.00	49.48
	ATOM	5095	OH2	WAT	1308	63.085	28.921	19.779	1.00	53.97
	ATOM	5096	OH2	WAT	1309	23.293	21.221	25.162	1.00	40.04
	ATOM	5097	OH2	WAT	1312	47.167	34.527	37.872	1.00	27.27
	ATOM	5098	OH2	WAT	1314	10.864	37.430	37.980	1.00	28.15
10	ATOM	5099	OH2	WAT	1315	44.856	27.880	46.189	1.00	30.95
	ATOM	5100	OH2	WAT	1317	58.272	25.539	24.981	1.00	32.58
	ATOM	5101	OH2	WAT	1318	18.820	50.334	62.005	1.00	36.58
	ATOM	5102	OH2	WAT	1319	30.841	37.131	59.111	1.00	46.56
	ATOM	5103	OH2	WAT	1320	29.617	62.035	68.933	1.00	44.43
15	ATOM	5104	OH2	WAT	1321	46.544	35.226	40.439	1.00	40.06
	ATOM	5105	OH2	WAT	1322	28.073	10.853	25.663	1.00	40.56
	ATOM	5106	OH2	WAT	1323	42.441	29.122	46.515	1.00	39.18
	ATOM	5107	OH2	WAT	1324	32.503	25.207	20.281	1.00	30.43
	ATOM	5108	OH2	WAT	1325	45.433	45.115	68.057	1.00	34.28
20	ATOM	5109	OH2	WAT	1326	60.152	17.493	35.180	1.00	31.13
	ATOM	5110	OH2	WAT	1327	18.398	27.449	35.882	1.00	37.64
	ATOM	5111	OH2	WAT	1328	25.504	31.112	20.438	1.00	38.34
	ATOM	5112	OH2	WAT	1329	30.779	47.918	51.067	1.00	35.49
	ATOM	5113	OH2	WAT	1330	19.913	28.817	33.764	1.00	31.28
25	ATOM	5114	OH2	WAT	1331	41.767	10.738	28.096	1.00	41.34
	ATOM	5115	OH2	WAT	1332	26.547	23.240	56.068	1.00	41.06
	ATOM	5116	OH2	WAT	1333	33.925	58.939	47.024	1.00	34.77
	ATOM	5117	OH2	WAT	1334	22.602	51.105	36.733	1.00	43.04
	ATOM	5118	OH2	WAT	1335	22.996	38.949	26.371	1.00	38.28
30	ATOM	5119	OH2	WAT	1336	29.162	20.497	16.594	1.00	43.76
	ATOM	5120	OH2	WAT	1337	20.274	17.838	34.214	1.00	44.34
	ATOM	5121	OH2	WAT	1338	39.624	36.468	69.824	1.00	40.01
	ATOM	5122	OH2	WAT	1339	37.483	51.842	59.120	1.00	44.97
	ATOM	5123	OH2	WAT	1340	24.717	29.196	23.868	1.00	34.46
35	ATOM	5124	OH2	WAT	1341	44.042	21.496	47.701	1.00	33.63
	ATOM	5125	OH2	WAT	1342	13.466	35.511	57.867	1.00	42.68
	ATOM	5126	OH2	WAT	1343	55.772	29.777	32.992	1.00	44.58
	ATOM	5127	OH2	WAT	1344	14.280	32.060	49.325	1.00	38.28
	ATOM	5128	OH2	WAT	1345	45.443	50.731	25.094	1.00	46.95
40	ATOM	5129	OH2	WAT	1346	68.409	39.510	47.837	1.00	41.69
	ATOM	5130	OH2	WAT	1347	39.778	58.278	43.142	1.00	32.41
	ATOM	5131	OH2	WAT	1348	29.470	22.597	20.692	1.00	48.08
	ATOM	5132	OH2	WAT	1349	24.093	35.444	64.264	1.00	35.01
	ATOM	5133	OH2	WAT	1351	26.090	30.612	28.125	1.00	36.91
45	ATOM	5134	OH2	WAT	1352	17.332	33.459	57.443	1.00	41.72
	ATOM	5135	OH2	WAT	1353	56.042	23.489	25.469	1.00	43.75
	ATOM	5136	OH2	WAT	1354	42.787	43.334	56.083	1.00	40.09
	ATOM	5137	OH2	WAT	1355	50.830	26.069	35.611	1.00	40.02
	ATOM	5138	OH2	WAT	1356	38.381	12.374	24.731	1.00	44.11
50	ATOM	5139	OH2	WAT	1357	44.282	44.869	20.284	1.00	42.34
	ATOM	5140	OH2	WAT	1359	34.183	42.608	20.745	1.00	46.91
	ATOM	5141	OH2	WAT	1360	31.973	57.138	43.492	1.00	43.69
	ATOM	5142	OH2	WAT	1361	47.127	28.967	63.758	1.00	39.75
	ATOM	5143	OH2	WAT	1362	16.760	48.273	38.728	1.00	43.33
55	ATOM	5144	OH2	WAT	1363	31.959	52.844	61.725	1.00	48.88
	ATOM	5145	OH2	WAT	1364	48.548	41.547	13.592	1.00	46.21
	ATOM	5146	OH2	WAT	1365	28.676	25.375	20.616	1.00	37.11
	ATOM	5147	OH2	WAT	1366	29.885	56.396	44.858	1.00	36.90
	ATOM	5148	OH2	WAT	1367	40.319	47.450	20.023	1.00	43.96
60	ATOM	5149	OH2	WAT	1368	38.503	60.152	44.332	1.00	32.68
	ATOM	5150	OH2	WAT	1369	44.801	17.250	50.502	1.00	43.13

	ATOM	5151	WAT	1370	37.328	23.957	49.000	1.00	45.36
	ATOM	5152	OH2 WAT	1371	24.009	57.807	55.904	1.00	42.44
	ATOM	5153	OH2 WAT	1372	28.513	45.956	53.486	1.00	46.34
	ATOM	5154	OH2 WAT	1373	49.030	36.730	6.520	1.00	45.48
5	ATOM	5155	OH2 WAT	1374	38.498	35.628	50.765	1.00	26.69
	ATOM	5156	OH2 WAT	1375	39.668	33.298	50.610	1.00	33.61
	ATOM	5157	OH2 WAT	1376	52.375	26.835	60.266	1.00	44.32
	ATOM	5158	OH2 WAT	1377	55.500	25.818	58.095	1.00	44.59
	ATOM	5159	OH2 WAT	1378	30.116	36.834	19.045	1.00	39.93
10	ATOM	5160	OH2 WAT	1381	43.493	27.126	35.565	1.00	48.96
	ATOM	5161	OH2 WAT	1382	33.586	58.999	44.339	1.00	41.52
	ATOM	5162	OH2 WAT	1383	35.232	41.723	71.023	1.00	46.74
	ATOM	5163	OH2 WAT	1384	71.095	37.535	44.165	1.00	41.47
	ATOM	5164	OH2 WAT	1386	48.253	57.473	71.974	1.00	43.72
15	ATOM	5165	C1 NAG	691	38.666	22.463	66.650	0.50	29.58
	ATOM	5166	C2 NAG	691	39.962	22.246	67.525	0.50	29.55
	ATOM	5167	C3 NAG	691	39.524	21.408	68.772	0.50	29.52
	ATOM	5168	C4 NAG	691	38.496	22.259	69.550	0.50	29.70
	ATOM	5169	C5 NAG	691	37.241	22.504	68.605	0.50	30.07
20	ATOM	5170	C6 NAG	691	36.157	23.293	69.219	0.50	28.97
	ATOM	5171	C7 NAG	691	42.209	21.838	66.543	0.50	29.68
	ATOM	5172	C8 NAG	691	43.027	20.911	65.781	0.50	29.38
	ATOM	5173	N2 NAG	691	40.925	21.438	66.776	0.50	28.28
	ATOM	5174	O3 NAG	691	40.679	21.179	69.596	0.50	29.08
25	ATOM	5175	O4 NAG	691	38.067	21.525	70.710	0.50	31.81
	ATOM	5176	O5 NAG	691	37.742	23.245	67.408	0.50	28.44
	ATOM	5177	O6 NAG	691	34.965	23.182	68.486	0.50	29.28
	ATOM	5178	O7 NAG	691	42.632	22.844	66.920	0.50	30.40
	ATOM	5179	C1 NAG	692	26.823	46.501	73.110	0.25	30.78
30	ATOM	5180	C2 NAG	692	26.060	47.367	74.194	0.25	29.79
	ATOM	5181	C3 NAG	692	26.339	46.684	75.578	0.25	28.68
	ATOM	5182	C4 NAG	692	25.778	45.248	75.517	0.25	28.12
	ATOM	5183	C5 NAG	692	26.546	44.463	74.365	0.25	28.47
	ATOM	5184	C6 NAG	692	26.141	43.054	74.189	0.25	27.89
	ATOM	5185	C7 NAG	692	27.924	49.127	74.485	0.25	29.38
35	ATOM	5186	C8 NAG	692	28.176	50.560	74.479	0.25	29.34
	ATOM	5187	N2 NAG	692	26.610	48.755	74.247	0.25	29.38
	ATOM	5188	O3 NAG	692	25.663	47.437	76.598	0.25	28.79
	ATOM	5189	O4 NAG	692	26.031	44.601	76.779	0.25	26.69
40	ATOM	5190	O5 NAG	692	26.263	45.191	73.097	0.25	29.85
	ATOM	5191	O6 NAG	692	26.884	42.425	73.176	0.25	25.82
	ATOM	5192	O7 NAG	692	28.778	48.376	74.677	0.25	28.91
	ATOM	5193	C1 NAG	693	45.844	65.857	60.275	0.50	34.64
	ATOM	5194	C2 NAG	693	47.343	66.335	60.338	0.50	33.61
45	ATOM	5195	C3 NAG	693	48.225	65.046	60.320	0.50	33.54
	ATOM	5196	C4 NAG	693	47.874	64.228	61.582	0.50	33.12
	ATOM	5197	C5 NAG	693	46.335	63.825	61.490	0.50	32.64
	ATOM	5198	C6 NAG	693	45.829	63.006	62.614	0.50	32.29
	ATOM	5199	C7 NAG	693	47.847	68.449	59.114	0.50	33.80
50	ATOM	5200	C8 NAG	693	48.147	69.026	57.814	0.50	33.51
	ATOM	5201	N2 NAG	693	47.658	67.096	59.127	0.50	33.78
	ATOM	5202	O3 NAG	693	49.604	65.442	60.373	0.50	34.37
	ATOM	5203	O4 NAG	693	48.672	63.030	61.597	0.50	32.73
	ATOM	5204	O5 NAG	693	45.563	65.105	61.455	0.50	32.95
55	ATOM	5205	O6 NAG	693	46.059	63.613	63.861	0.50	33.79
	ATOM	5206	O7 NAG	693	47.775	69.104	60.061	0.50	34.69
	ATOM	5207	C1 NAG	694	34.333	4.445	43.451	0.50	42.09
	ATOM	5208	C2 NAG	694	35.344	3.237	43.321	0.50	40.59
	ATOM	5209	C3 NAG	694	36.776	3.873	43.266	0.50	40.44
60	ATOM	5210	C4 NAG	694	36.837	4.763	42.008	0.50	39.57
	ATOM	5211	C5 NAG	694	35.747	5.912	42.160	0.50	40.19

	ATOM	5	C6	NAG	694	35.697	6.867	0.038	0.50	39.67
	ATOM	5213	C7	NAG	694	35.390	1.041	44.522	0.50	38.40
	ATOM	5214	C8	NAG	694	35.318	0.390	45.820	0.50	37.85
5	ATOM	5215	N2	NAG	694	35.289	2.407	44.534	0.50	39.83
	ATOM	5216	O3	NAG	694	37.745	2.817	43.151	0.50	41.14
	ATOM	5217	O4	NAG	694	38.143	5.361	41.930	0.50	39.45
	ATOM	5218	O5	NAG	694	34.422	5.231	42.261	0.50	40.94
	ATOM	5219	O6	NAG	694	36.230	8.118	41.399	0.50	40.94
	ATOM	5220	O7	NAG	694	35.527	0.432	43.553	0.50	39.01
10	ATOM	5221	C1	NAG	695	56.458	28.072	65.509	0.25	31.56
	ATOM	5222	C2	NAG	695	56.666	26.508	65.432	0.25	30.72
	ATOM	5223	C3	NAG	695	56.499	25.969	66.893	0.25	29.54
	ATOM	5224	C4	NAG	695	57.609	26.616	67.754	0.25	29.02
	ATOM	5225	C5	NAG	695	57.392	28.194	67.738	0.25	28.93
15	ATOM	5226	C6	NAG	695	58.361	28.972	68.535	0.25	29.26
	ATOM	5227	C7	NAG	695	55.782	25.465	63.341	0.25	29.26
	ATOM	5228	C8	NAG	695	54.608	24.896	62.697	0.25	29.00
	ATOM	5229	N2	NAG	695	55.599	25.907	64.623	0.25	29.43
	ATOM	5230	O3	NAG	695	56.674	24.544	66.875	0.25	30.87
20	ATOM	5231	O4	NAG	695	57.485	26.137	69.107	0.25	27.69
	ATOM	5232	O5	NAG	695	57.504	28.627	66.310	0.25	30.15
	ATOM	5233	O6	NAG	695	57.844	30.233	68.885	0.25	30.07
	ATOM	5234	O7	NAG	695	56.794	25.529	62.791	0.25	29.27
	ATOM	5235	C1	NAG	696	43.763	59.783	31.843	0.50	32.65
25	ATOM	5236	C2	NAG	696	43.513	59.801	30.283	0.50	33.89
	ATOM	5237	C3	NAG	696	42.464	60.933	30.025	0.50	34.52
	ATOM	5238	C4	NAG	696	41.169	60.556	30.774	0.50	34.29
	ATOM	5239	C5	NAG	696	41.517	60.476	32.322	0.50	33.83
	ATOM	5240	C6	NAG	696	40.400	60.153	33.216	0.50	33.87
30	ATOM	5241	C7	NAG	696	45.496	59.327	28.856	0.50	33.72
	ATOM	5242	C8	NAG	696	46.660	59.906	28.211	0.50	33.27
	ATOM	5243	N2	NAG	696	44.730	60.198	29.572	0.50	33.67
	ATOM	5244	O3	NAG	696	42.197	61.001	28.614	0.50	36.84
	ATOM	5245	O4	NAG	696	40.196	61.589	30.553	0.50	36.06
35	ATOM	5246	O5	NAG	696	42.537	59.408	32.458	0.50	34.67
	ATOM	5247	O6	NAG	696	40.731	60.434	34.555	0.50	33.99
	ATOM	5248	O7	NAG	696	45.250	58.204	28.755	0.50	33.63
	ATOM	5249	C	ACY	700	42.190	36.698	47.868	1.00	17.87
	ATOM	5250	O	ACY	700	43.358	36.429	48.383	1.00	17.41
40	ATOM	5251	OXT	ACY	700	41.942	37.484	46.891	1.00	16.00
	ATOM	5252	CH3	ACY	700	41.037	35.966	48.550	1.00	16.17
	ATOM	5253	O1	MSA	702	40.494	34.478	45.311	1.00	21.85
	ATOM	5254	O2	MSA	702	4				

Table B

Co-ordinates of an underglycosylated tACEΔ36NJ ACE-lisinopril complex

5 REMARK coordinates from minimization refinement
 REMARK refinement resolution: 47.14 - 2.0 Å
 REMARK starting r= 0.1816 free_r= 0.2186
 REMARK final r= 0.1814 free_r= 0.2188
 REMARK rmsd bonds= 0.005621 rmsd angles= 1.23822

10 REMARK wa= 0.450786
 REMARK target= mlf cycles= 1 steps= 10
 REMARK sg= P2(1)2(1)2(1) a= 56.472 b= 84.899 c= 133.990 alpha= 90
 beta= 90 gamma= 90
 REMARK anomalous f' f'' library: CNS_XRAYLIB:anom_cu.lib

15 REMARK reflection file= ../dm10_2A.cv
 REMARK ncs= none
 REMARK B-correction resolution: 6.0 - 2.0
 REMARK initial B-factor correction applied to fobs :

20 REMARK B11= 1.410 B22= 0.301 B33= -1.711
 REMARK B12= 0.000 B13= 0.000 B23= 0.000
 REMARK B-factor correction applied to coordinate array B: 0.605
 REMARK bulk solvent: density level= 0.336734 e/Å³, B-factor= 42.5542
 Å²

25 REMARK reflections with |Fobs|/sigma_F < 0.0 rejected
 REMARK reflections with |Fobs| > 10000 * rms(Fobs) rejected
 REMARK anomalous diffraction data was input
 REMARK theoretical total number of refl. in resol. range: 84079 (100.0 %)

30 REMARK number of unobserved reflections (no entry or |F|=0):821 (5.7 %)
 REMARK number of reflections rejected: 0 (0.0 %)
 REMARK total number of reflections used: 79258 (94.3 %)
 REMARK number of reflections in working set: 76164 (90.6 %)
 REMARK number of reflections in test set: 3094 (3.7 %)

35 REMARK CRYST1 56.472 84.899 133.990 90.00 90.00 P 21 21 21
 REMARK VERSION:1.1

40	ATOM	1	CB	ALA	71	34.080	71.619	65.828	1.00	37.03
	ATOM	2	C	ALA	71	36.046	70.116	66.197	1.00	37.52
	ATOM	3	O	ALA	71	35.940	68.889	66.147	1.00	37.50
	ATOM	4	N	ALA	71	35.606	72.021	67.727	1.00	37.87
	ATOM	5	CA	ALA	71	34.977	70.970	66.876	1.00	37.06
	ATOM	6	N	GLU	72	37.077	70.776	65.680	1.00	36.64
	ATOM	7	CA	GLU	72	38.178	70.092	65.008	1.00	37.31
	ATOM	8	CB	GLU	72	39.088	71.119	64.323	1.00	37.75
45	ATOM	9	CG	GLU	72	40.071	70.565	63.292	1.00	41.00
	ATOM	10	CD	GLU	72	39.421	70.271	61.945	1.00	42.37
	ATOM	11	OE1	GLU	72	38.580	71.081	61.495	1.00	42.32
	ATOM	12	OE2	GLU	72	39.764	69.237	61.329	1.00	44.26
	ATOM	13	C	GLU	72	39.973	69.307	66.051	1.00	37.09
50	ATOM	14	O	GLU	72	38.973	69.307	66.051	1.00	37.09
	ATOM	15	N	ALA	73	39.518	68.241	65.758	1.00	36.65
	ATOM	16	CA	ALA	73	39.030	69.841	67.270	1.00	35.26
	ATOM	17	CB	ALA	73	39.751	69.193	68.361	1.00	33.85
	ATOM	18	C	ALA	73	39.874	70.140	69.549	1.00	34.20
	ATOM	19	O	ALA	73	39.018	67.921	68.779	1.00	32.78
55	ATOM	20	N	GLU	74	39.640	66.900	69.076	1.00	32.36
	ATOM	21	CA	GLU	74	37.692	67.996	68.807	1.00	31.76
	ATOM	22	CB	GLU	74	36.867	66.849	69.169	1.00	32.74
	ATOM	23	CG	GLU	74	35.393	67.257	69.234	1.00	34.51
60	ATOM	24	CD	GLU	74	34.783	67.216	70.619	1.00	39.69
						33.360	67.750	70.636	1.00	43.24

	ATOM	1	OE1	GLU	74	32.467	67.110	70.332	1.00	44.62
	ATOM	26	OE2	GLU	74	33.139	68.819	71.249	1.00	44.03
	ATOM	27	C	GLU	74	37.036	65.758	68.118	1.00	31.08
	ATOM	28	O	GLU	74	36.987	64.568	68.422	1.00	30.67
5	ATOM	29	N	ALA	75	37.242	66.185	66.877	1.00	29.99
	ATOM	30	CA	ALA	75	37.399	65.267	65.754	1.00	28.87
	ATOM	31	CB	ALA	75	37.351	66.043	64.442	1.00	27.23
	ATOM	32	C	ALA	75	38.669	64.421	65.814	1.00	27.10
	ATOM	33	O	ALA	75	38.608	63.201	65.663	1.00	26.57
10	ATOM	34	N	SER	76	39.817	65.060	66.027	1.00	26.04
	ATOM	35	CA	SER	76	41.078	64.326	66.089	1.00	25.45
	ATOM	36	CB	SER	76	42.268	65.290	66.137	1.00	26.93
	ATOM	37	OG	SER	76	42.278	66.033	67.338	1.00	32.77
	ATOM	38	C	SER	76	41.101	63.404	67.302	1.00	23.44
15	ATOM	39	O	SER	76	41.710	62.337	67.265	1.00	25.13
	ATOM	40	N	LYS	77	40.438	63.823	68.373	1.00	22.27
	ATOM	41	CA	LYS	77	40.354	63.024	69.589	1.00	21.77
	ATOM	42	CB	LYS	77	39.744	63.856	70.717	1.00	25.02
	ATOM	43	CG	LYS	77	39.406	63.069	71.974	1.00	28.89
20	ATOM	44	CD	LYS	77	38.810	63.983	73.038	1.00	34.02
	ATOM	45	CE	LYS	77	37.827	63.235	73.916	1.00	36.45
	ATOM	46	NZ	LYS	77	36.683	62.717	73.107	1.00	39.31
	ATOM	47	C	LYS	77	39.484	61.798	69.315	1.00	20.85
	ATOM	48	O	LYS	77	39.791	60.691	69.758	1.00	19.15
25	ATOM	49	N	PHE	78	38.395	62.005	68.582	1.00	20.00
	ATOM	50	CA	PHE	78	37.497	60.912	68.232	1.00	20.44
	ATOM	51	CB	PHE	78	36.323	61.433	67.399	1.00	20.72
	ATOM	52	CG	PHE	78	35.490	60.344	66.779	1.00	22.38
	ATOM	53	CD1	PHE	78	34.602	59.605	67.550	1.00	21.45
30	ATOM	54	CD2	PHE	78	35.612	60.045	65.427	1.00	21.21
	ATOM	55	CE1	PHE	78	33.845	58.580	66.985	1.00	23.63
	ATOM	56	CE2	PHE	78	34.860	59.021	64.853	1.00	24.14
	ATOM	57	CZ	PHE	78	33.976	58.288	65.632	1.00	21.01
	ATOM	58	C	PHE	78	38.274	59.878	67.421	1.00	19.50
35	ATOM	59	O	PHE	78	38.222	58.680	67.702	1.00	19.55
	ATOM	60	N	VAL	79	39.004	60.358	66.418	1.00	20.22
	ATOM	61	CA	VAL	79	39.790	59.484	65.556	1.00	21.86
	ATOM	62	CB	VAL	79	40.528	60.312	64.473	1.00	23.18
	ATOM	63	CG1	VAL	79	41.695	59.532	63.902	1.00	27.20
40	ATOM	64	CG2	VAL	79	39.555	60.661	63.355	1.00	23.07
	ATOM	65	C	VAL	79	40.782	58.648	66.365	1.00	22.62
	ATOM	66	O	VAL	79	40.920	57.445	66.132	1.00	22.22
	ATOM	67	N	GLU	80	41.459	59.280	67.320	1.00	22.66
	ATOM	68	CA	GLU	80	42.418	58.570	68.165	1.00	22.34
45	ATOM	69	CB	GLU	80	43.117	59.544	69.122	1.00	25.90
	ATOM	70	CG	GLU	80	43.893	60.652	68.424	1.00	31.05
	ATOM	71	CD	GLU	80	44.564	61.606	69.399	1.00	35.35
	ATOM	72	OE1	GLU	80	43.881	62.088	70.333	1.00	36.66
	ATOM	73	OE2	GLU	80	45.772	61.880	69.225	1.00	37.98
50	ATOM	74	C	GLU	80	41.726	57.475	68.977	1.00	20.25
	ATOM	75	O	GLU	80	42.209	56.345	69.046	1.00	18.55
	ATOM	76	N	GLU	81	40.595	57.811	69.595	1.00	18.66
	ATOM	77	CA	GLU	81	39.863	56.836	70.399	1.00	19.96
	ATOM	78	CB	GLU	81	38.702	57.512	71.134	1.00	21.24
55	ATOM	79	CG	GLU	81	39.168	58.560	72.135	1.00	23.95
	ATOM	80	CD	GLU	81	38.027	59.258	72.845	1.00	26.18
	ATOM	81	OE1	GLU	81	36.854	58.937	72.564	1.00	27.70
	ATOM	82	OE2	GLU	81	38.311	60.133	73.691	1.00	28.83
	ATOM	83	C	GLU	81	39.352	55.704	69.514	1.00	18.59
60	ATOM	84	O	GLU	81	39.428	54.529	69.881	1.00	16.88
	ATOM	85	N	TYR	82	38.839	56.060	68.341	1.00	17.35

	ATOM	86	TYR	82	38.345	55.059	67.112	1.00	17.12
	ATOM	87	CB TYR	82	37.807	55.726	66.143	1.00	15.74
	ATOM	88	CG TYR	82	37.428	54.730	65.071	1.00	15.18
	ATOM	89	CD1 TYR	82	36.303	53.918	65.217	1.00	13.96
5	ATOM	90	CE1 TYR	82	35.957	52.986	64.244	1.00	13.99
	ATOM	91	CD2 TYR	82	38.204	54.583	63.924	1.00	14.71
	ATOM	92	CE2 TYR	82	37.871	53.652	62.942	1.00	16.19
	ATOM	93	CZ TYR	82	36.744	52.862	63.108	1.00	15.36
	ATOM	94	OH TYR	82	36.388	51.969	62.131	1.00	14.06
10	ATOM	95	C TYR	82	39.469	54.089	67.027	1.00	16.14
	ATOM	96	O TYR	82	39.279	52.876	67.018	1.00	15.38
	ATOM	97	N ASP	83	40.642	54.630	66.719	1.00	17.88
	ATOM	98	CA ASP	83	41.770	53.798	66.315	1.00	19.78
	ATOM	99	CB ASP	83	42.938	54.670	65.855	1.00	21.25
15	ATOM	100	CG ASP	83	44.049	53.855	65.214	1.00	27.73
	ATOM	101	OD1 ASP	83	43.791	53.214	64.168	1.00	30.70
	ATOM	102	OD2 ASP	83	45.178	53.846	65.752	1.00	28.73
	ATOM	103	C ASP	83	42.267	52.835	67.394	1.00	20.18
	ATOM	104	O ASP	83	42.446	51.645	67.132	1.00	19.78
20	ATOM	105	N ARG	84	42.497	53.338	68.604	1.00	19.30
	ATOM	106	CA ARG	84	42.994	52.461	69.656	1.00	21.26
	ATOM	107	CB ARG	84	43.473	53.271	70.871	1.00	22.61
	ATOM	108	CG ARG	84	42.506	54.308	71.400	1.00	24.22
	ATOM	109	CD ARG	84	43.054	54.955	72.673	1.00	24.57
25	ATOM	110	NE ARG	84	44.153	55.891	72.435	1.00	24.09
	ATOM	111	CZ ARG	84	44.020	57.216	72.424	1.00	22.92
	ATOM	112	NH1 ARG	84	42.833	57.772	72.633	1.00	23.01
	ATOM	113	NH2 ARG	84	45.078	57.990	72.228	1.00	22.71
	ATOM	114	C ARG	84	41.987	51.395	70.075	1.00	19.10
30	ATOM	115	O ARG	84	42.372	50.264	70.352	1.00	17.70
	ATOM	116	N THR	85	40.702	51.739	70.101	1.00	18.78
	ATOM	117	CA THR	85	39.685	50.762	70.482	1.00	18.36
	ATOM	118	CB THR	85	38.350	51.447	70.903	1.00	18.42
	ATOM	119	OG1 THR	85	37.846	52.253	69.829	1.00	18.84
35	ATOM	120	CG2 THR	85	38.565	52.321	72.135	1.00	19.44
	ATOM	121	C THR	85	39.406	49.762	69.353	1.00	18.86
	ATOM	122	O THR	85	39.099	48.597	69.610	1.00	18.81
	ATOM	123	N SER	86	39.516	50.214	68.107	1.00	19.00
	ATOM	124	CA SER	86	39.269	49.338	66.962	1.00	19.38
40	ATOM	125	CB SER	86	39.279	50.142	65.660	1.00	17.79
	ATOM	126	OG SER	86	38.175	51.031	65.605	1.00	18.69
	ATOM	127	C SER	86	40.305	48.219	66.885	1.00	20.96
	ATOM	128	O SER	86	39.966	47.060	66.630	1.00	21.64
	ATOM	129	N GLN	87	41.566	48.569	67.109	1.00	21.67
45	ATOM	130	CA GLN	87	42.647	47.593	67.068	1.00	23.50
	ATOM	131	CB GLN	87	43.958	48.246	67.494	1.00	25.78
	ATOM	132	CG GLN	87	44.498	49.257	66.514	1.00	30.26
	ATOM	133	CD GLN	87	45.770	49.899	67.014	1.00	33.27
	ATOM	134	OE1 GLN	87	46.693	49.212	67.453	1.00	35.56
50	ATOM	135	NE2 GLN	87	45.831	51.225	66.947	1.00	35.59
	ATOM	136	C GLN	87	42.370	46.401	67.978	1.00	23.44
	ATOM	137	O GLN	87	42.576	45.252	67.593	1.00	23.72
	ATOM	138	N VAL	88	41.908	46.684	69.190	1.00	23.72
	ATOM	139	CA VAL	88	41.616	45.635	70.154	1.00	22.98
55	ATOM	140	CB VAL	88	41.316	46.234	71.546	1.00	24.62
	ATOM	141	CG1 VAL	88	41.060	45.114	72.549	1.00	24.67
	ATOM	142	CG2 VAL	88	42.486	47.102	72.004	1.00	23.17
	ATOM	143	C VAL	88	40.432	44.769	69.725	1.00	23.12
	ATOM	144	O VAL	88	40.536	43.543	69.672	1.00	21.83
60	ATOM	145	N VAL	89	39.306	45.406	69.417	1.00	21.91
	ATOM	146	CA VAL	89	38.114	44.673	69.010	1.00	22.14

	ATOM		CB	VAL	89	36.889	45.623	67.873	1.00	22.30
	ATOM	148	CG1	VAL	89	37.197	46.738	67.901	1.00	25.90
	ATOM	149	CG2	VAL	89	35.675	44.844	68.406	1.00	25.67
	ATOM	150	C	VAL	89	38.317	43.904	67.700	1.00	21.76
5	ATOM	151	O	VAL	89	37.875	42.762	67.576	1.00	20.11
	ATOM	152	N	TRP	90	38.980	44.526	66.728	1.00	21.83
	ATOM	153	CA	TRP	90	39.224	43.868	65.448	1.00	22.98
	ATOM	154	CB	TRP	90	39.759	44.873	64.419	1.00	24.28
	ATOM	155	CG	TRP	90	38.739	45.905	63.988	1.00	28.97
10	ATOM	156	CD2	TRP	90	38.805	46.752	62.832	1.00	30.58
	ATOM	157	CE2	TRP	90	37.665	47.586	62.859	1.00	31.50
	ATOM	158	CE3	TRP	90	39.717	46.890	61.777	1.00	31.93
	ATOM	159	CD1	TRP	90	37.593	46.250	64.645	1.00	30.90
	ATOM	160	NE1	TRP	90	36.943	47.257	63.975	1.00	30.56
15	ATOM	161	CZ2	TRP	90	37.411	48.546	61.871	1.00	32.79
	ATOM	162	CZ3	TRP	90	39.464	47.847	60.792	1.00	33.43
	ATOM	163	CH2	TRP	90	38.319	48.662	60.850	1.00	32.95
	ATOM	164	C	TRP	90	40.207	42.714	65.622	1.00	21.98
	ATOM	165	O	TRP	90	40.089	41.692	64.957	1.00	22.45
20	ATOM	166	N	ASN	91	41.175	42.870	66.518	1.00	22.59
	ATOM	167	CA	ASN	91	42.137	41.799	66.744	1.00	23.45
	ATOM	168	CB	ASN	91	43.253	42.245	67.690	1.00	22.82
	ATOM	169	CG	ASN	91	44.153	41.091	68.103	1.00	25.02
	ATOM	170	OD1	ASN	91	43.810	40.313	68.993	1.00	26.35
25	ATOM	171	ND2	ASN	91	45.301	40.961	67.442	1.00	25.21
	ATOM	172	C	ASN	91	41.434	40.577	67.321	1.00	24.29
	ATOM	173	O	ASN	91	41.721	39.443	66.929	1.00	24.22
	ATOM	174	N	GLU	92	40.511	40.813	68.249	1.00	23.78
	ATOM	175	CA	GLU	92	39.767	39.726	68.863	1.00	24.44
30	ATOM	176	CB	GLU	92	38.940	40.242	70.046	1.00	27.98
	ATOM	177	CG	GLU	92	39.655	40.108	71.386	1.00	32.87
	ATOM	178	CD	GLU	92	38.998	40.903	72.502	1.00	33.99
	ATOM	179	OE1	GLU	92	37.797	40.691	72.771	1.00	36.12
	ATOM	180	OE2	GLU	92	39.690	41.740	73.116	1.00	35.60
35	ATOM	181	C	GLU	92	38.859	39.041	67.857	1.00	24.09
	ATOM	182	O	GLU	92	38.731	37.817	67.867	1.00	25.43
	ATOM	183	N	TYR	93	38.230	39.824	66.987	1.00	22.66
	ATOM	184	CA	TYR	93	37.343	39.253	65.982	1.00	22.78
	ATOM	185	CB	TYR	93	36.609	40.346	65.202	1.00	23.71
40	ATOM	186	CG	TYR	93	35.739	39.782	64.102	1.00	24.71
	ATOM	187	CD1	TYR	93	34.533	39.149	64.398	1.00	25.73
	ATOM	188	CE1	TYR	93	33.759	38.563	63.398	1.00	27.34
	ATOM	189	CD2	TYR	93	36.152	39.820	62.771	1.00	27.78
	ATOM	190	CE2	TYR	93	35.389	39.235	61.761	1.00	28.66
45	ATOM	191	CZ	TYR	93	34.194	38.608	62.083	1.00	28.76
	ATOM	192	OH	TYR	93	33.441	38.020	61.093	1.00	30.77
	ATOM	193	C	TYR	93	38.140	38.401	65.002	1.00	21.84
	ATOM	194	O	TYR	93	37.705	37.319	64.608	1.00	20.79
	ATOM	195	N	ALA	94	39.304	38.902	64.605	1.00	21.93
50	ATOM	196	CA	ALA	94	40.160	38.185	63.669	1.00	23.19
	ATOM	197	CB	ALA	94	41.438	38.984	63.415	1.00	21.92
	ATOM	198	C	ALA	94	40.501	36.803	64.223	1.00	22.67
	ATOM	199	O	ALA	94	40.570	35.824	63.480	1.00	23.01
	ATOM	200	N	ALA	95	40.701	36.733	65.536	1.00	24.22
55	ATOM	201	CA	ALA	95	41.041	35.482	66.210	1.00	24.36
	ATOM	202	CB	ALA	95	41.354	35.757	67.676	1.00	28.15
	ATOM	203	C	ALA	95	39.922	34.455	66.105	1.00	24.75
	ATOM	204	O	ALA	95	40.147	33.311	65.707	1.00	25.33
	ATOM	205	N	ALA	96	38.715	34.867	66.474	1.00	24.39
60	ATOM	206	CA	ALA	96	37.563	33.978	66.421	1.00	24.27
	ATOM	207	CB	ALA	96	36.350	34.670	67.026	1.00	23.28

	ATOM	208	ALA	96	37.266	33.552	64.9	1.00	23.78
	ATOM	209	O ALA	96	36.898	32.403	64.724	1.00	23.70
	ATOM	210	N ASN	97	37.426	34.483	64.051	1.00	21.38
	ATOM	211	CA ASN	97	37.162	34.200	62.647	1.00	22.12
5	ATOM	212	CB ASN	97	37.224	35.506	61.845	1.00	20.92
	ATOM	213	CG ASN	97	36.706	35.353	60.433	1.00	22.34
	ATOM	214	OD1 ASN	97	35.908	34.459	60.140	1.00	20.62
	ATOM	215	ND2 ASN	97	37.144	36.243	59.548	1.00	20.25
	ATOM	216	C ASN	97	38.192	33.189	62.142	1.00	21.72
10	ATOM	217	O ASN	97	37.863	32.270	61.393	1.00	21.75
	ATOM	218	N TRP	98	39.437	33.353	62.576	1.00	21.37
	ATOM	219	CA TRP	98	40.502	32.449	62.172	1.00	23.30
	ATOM	220	CB TRP	98	41.856	32.963	62.676	1.00	21.74
	ATOM	221	CG TRP	98	42.995	32.002	62.444	1.00	23.76
15	ATOM	222	CD2 TRP	98	43.871	31.960	61.305	1.00	22.12
	ATOM	223	CE2 TRP	98	44.772	30.891	61.510	1.00	23.47
	ATOM	224	CE3 TRP	98	43.979	32.720	60.131	1.00	21.74
	ATOM	225	CD1 TRP	98	43.390	30.985	63.266	1.00	23.18
	ATOM	226	NE1 TRP	98	44.456	30.314	62.712	1.00	24.63
20	ATOM	227	CZ2 TRP	98	45.772	30.562	60.584	1.00	21.94
	ATOM	228	CZ3 TRP	98	44.973	32.392	59.209	1.00	20.39
	ATOM	229	CH2 TRP	98	45.856	31.320	59.444	1.00	20.85
	ATOM	230	C TRP	98	40.251	31.041	62.702	1.00	23.90
	ATOM	231	O TRP	98	40.306	30.061	61.953	1.00	21.48
25	ATOM	232	N ASN	99	39.963	30.945	63.997	1.00	25.31
	ATOM	233	CA ASN	99	39.716	29.648	64.619	1.00	24.92
	ATOM	234	CB ASN	99	39.393	29.820	66.103	1.00	24.71
	ATOM	235	CG ASN	99	40.545	30.430	66.874	1.00	25.68
	ATOM	236	OD1 ASN	99	41.690	30.397	66.423	1.00	26.00
30	ATOM	237	ND2 ASN	99	40.252	30.980	68.046	1.00	25.62
	ATOM	238	C ASN	99	38.594	28.901	63.922	1.00	24.14
	ATOM	239	O ASN	99	38.627	27.674	63.820	1.00	24.01
	ATOM	240	N TYR	100	37.600	29.633	63.433	1.00	23.70
	ATOM	241	CA TYR	100	36.504	28.978	62.738	1.00	23.65
35	ATOM	242	CB TYR	100	35.312	29.912	62.567	1.00	27.83
	ATOM	243	CG TYR	100	34.175	29.198	61.890	1.00	30.19
	ATOM	244	CD1 TYR	100	33.577	28.097	62.496	1.00	31.92
	ATOM	245	CE1 TYR	100	32.587	27.378	61.856	1.00	35.09
	ATOM	246	CD2 TYR	100	33.746	29.567	60.617	1.00	32.59
40	ATOM	247	CE2 TYR	100	32.746	28.848	59.961	1.00	33.60
	ATOM	248	CZ TYR	100	32.173	27.755	60.591	1.00	34.32
	ATOM	249	OH TYR	100	31.182	27.031	59.973	1.00	36.77
	ATOM	250	C TYR	100	36.943	28.492	61.360	1.00	22.55
	ATOM	251	O TYR	100	36.656	27.362	60.971	1.00	20.86
45	ATOM	252	N ASN	101	37.628	29.360	60.622	1.00	21.15
	ATOM	253	CA ASN	101	38.114	29.029	59.286	1.00	20.76
	ATOM	254	CB ASN	101	38.798	30.251	58.655	1.00	19.09
	ATOM	255	CG ASN	101	37.838	31.110	57.853	1.00	18.55
	ATOM	256	OD1 ASN	101	37.829	31.067	56.624	1.00	19.63
50	ATOM	257	ND2 ASN	101	37.018	31.892	58.546	1.00	18.23
	ATOM	258	C ASN	101	39.089	27.852	59.295	1.00	20.96
	ATOM	259	O ASN	101	39.149	27.084	58.332	1.00	21.16
	ATOM	260	N THR	102	39.851	27.714	60.378	1.00	19.64
	ATOM	261	CA THR	102	40.826	26.635	60.488	1.00	19.80
55	ATOM	262	CB THR	102	42.158	27.152	61.056	1.00	18.90
	ATOM	263	OG1 THR	102	41.937	27.725	62.347	1.00	19.19
	ATOM	264	CG2 THR	102	42.756	28.207	60.137	1.00	21.98
	ATOM	265	C THR	102	40.356	25.450	61.339	1.00	21.84
	ATOM	266	O THR	102	41.139	24.549	61.642	1.00	21.38
60	ATOM	267	N ASN	103	39.084	25.454	61.724	1.00	22.72
	ATOM	268	CA ASN	103	38.514	24.365	62.518	1.00	24.63

	ATOM	269	CB	ASN	103	39.149	24.313	64.919	1.00	26.53
	ATOM	270	CG	ASN	103	38.705	23.085	64.720	1.00	29.25
	ATOM	271	OD1	ASN	103	38.126	22.147	64.171	1.00	29.00
	ATOM	272	ND2	ASN	103	38.989	23.088	66.020	1.00	31.72
5	ATOM	273	C	ASN	103	37.012	24.567	62.626	1.00	23.73
	ATOM	274	O	ASN	103	36.502	25.032	63.643	1.00	24.12
	ATOM	275	N	ILE	104	36.313	24.224	61.551	1.00	25.67
	ATOM	276	CA	ILE	104	34.867	24.367	61.489	1.00	27.61
	ATOM	277	CB	ILE	104	34.338	24.109	60.059	1.00	28.22
10	ATOM	278	CG2	ILE	104	32.821	24.281	60.027	1.00	29.99
	ATOM	279	CG1	ILE	104	35.005	25.069	59.072	1.00	29.22
	ATOM	280	CD1	ILE	104	34.560	24.879	57.626	1.00	29.37
	ATOM	281	C	ILE	104	34.169	23.403	62.439	1.00	28.58
	ATOM	282	O	ILE	104	34.079	22.207	62.168	1.00	28.13
15	ATOM	283	N	THR	105	33.683	23.936	63.555	1.00	30.58
	ATOM	284	CA	THR	105	32.968	23.143	64.549	1.00	31.89
	ATOM	285	CB	THR	105	33.843	22.821	65.775	1.00	31.98
	ATOM	286	OG1	THR	105	34.107	24.026	66.506	1.00	33.11
	ATOM	287	CG2	THR	105	35.162	22.194	65.341	1.00	32.86
20	ATOM	288	C	THR	105	31.783	23.971	65.017	1.00	32.44
	ATOM	289	O	THR	105	31.752	25.188	64.827	1.00	32.52
	ATOM	290	N	THR	106	30.803	23.319	65.623	1.00	33.00
	ATOM	291	CA	THR	106	29.640	24.044	66.109	1.00	33.81
	ATOM	292	CB	THR	106	28.570	23.072	66.662	1.00	34.97
25	ATOM	293	OG1	THR	106	27.463	23.818	67.184	1.00	37.98
	ATOM	294	CG2	THR	106	29.155	22.199	67.752	1.00	34.76
	ATOM	295	C	THR	106	30.093	25.020	67.198	1.00	32.47
	ATOM	296	O	THR	106	29.512	26.094	67.361	1.00	31.96
	ATOM	297	N	GLU	107	31.153	24.655	67.917	1.00	31.54
30	ATOM	298	CA	GLU	107	31.687	25.501	68.985	1.00	32.42
	ATOM	299	CB	GLU	107	32.731	24.740	69.809	1.00	34.68
	ATOM	300	CG	GLU	107	32.272	23.390	70.349	1.00	40.20
	ATOM	301	CD	GLU	107	32.542	22.243	69.385	1.00	42.52
	ATOM	302	OE1	GLU	107	31.917	22.202	68.304	1.00	44.41
35	ATOM	303	OE2	GLU	107	33.390	21.383	69.710	1.00	44.47
	ATOM	304	C	GLU	107	32.327	26.783	68.445	1.00	31.96
	ATOM	305	O	GLU	107	31.980	27.883	68.875	1.00	31.54
	ATOM	306	N	THR	108	33.272	26.641	67.516	1.00	30.47
	ATOM	307	CA	THR	108	33.935	27.807	66.939	1.00	29.64
40	ATOM	308	CB	THR	108	35.056	27.402	65.946	1.00	29.18
	ATOM	309	OG1	THR	108	34.534	26.500	64.964	1.00	30.34
	ATOM	310	CG2	THR	108	36.210	26.741	66.683	1.00	26.97
	ATOM	311	C	THR	108	32.916	28.689	66.219	1.00	29.12
	ATOM	312	O	THR	108	33.050	29.911	66.201	1.00	29.17
45	ATOM	313	N	SER	109	31.895	28.069	65.631	1.00	28.85
	ATOM	314	CA	SER	109	30.851	28.822	64.937	1.00	29.69
	ATOM	315	CB	SER	109	29.809	27.885	64.321	1.00	29.41
	ATOM	316	OG	SER	109	30.254	27.336	63.098	1.00	31.41
	ATOM	317	C	SER	109	30.144	29.737	65.923	1.00	30.53
50	ATOM	318	O	SER	109	29.992	30.936	65.679	1.00	27.87
	ATOM	319	N	LYS	110	29.715	29.150	67.036	1.00	31.92
	ATOM	320	CA	LYS	110	29.002	29.876	68.077	1.00	33.73
	ATOM	321	CB	LYS	110	28.653	28.927	69.229	1.00	35.14
	ATOM	322	CG	LYS	110	27.472	29.384	70.080	1.00	38.08
55	ATOM	323	CD	LYS	110	27.054	28.310	71.080	1.00	39.49
	ATOM	324	CE	LYS	110	25.706	28.637	71.707	1.00	40.76
	ATOM	325	NZ	LYS	110	25.254	27.575	72.650	1.00	40.35
	ATOM	326	C	LYS	110	29.820	31.053	68.595	1.00	32.96
	ATOM	327	O	LYS	110	29.301	32.157	68.747	1.00	33.66
60	ATOM	328	N	ILE	111	31.101	30.820	68.858	1.00	32.50
	ATOM	329	CA	ILE	111	31.972	31.876	69.357	1.00	31.17

	ATOM	330	ILE	111	33.354	31.318	69.1	1.00	30.98
	ATOM	331	CG2 ILE	111	34.278	32.448	70.166	1.00	29.81
	ATOM	332	CG1 ILE	111	33.205	30.271	70.828	1.00	31.92
	ATOM	333	CD1 ILE	111	34.494	29.560	71.183	1.00	31.87
5	ATOM	334	C ILE	111	32.138	33.002	68.334	1.00	30.85
	ATOM	335	O ILE	111	32.164	34.180	68.693	1.00	31.16
	ATOM	336	N LEU	112	32.247	32.635	67.061	1.00	29.75
	ATOM	337	CA LEU	112	32.404	33.629	66.007	1.00	28.55
	ATOM	338	CB LEU	112	32.644	32.948	64.656	1.00	27.63
10	ATOM	339	CG LEU	112	32.720	33.872	63.430	1.00	26.14
	ATOM	340	CD1 LEU	112	33.789	34.938	63.643	1.00	22.46
	ATOM	341	CD2 LEU	112	33.021	33.046	62.187	1.00	24.13
	ATOM	342	C LEU	112	31.178	34.529	65.917	1.00	29.28
	ATOM	343	O LEU	112	31.303	35.754	65.907	1.00	29.00
15	ATOM	344	N LEU	113	29.997	33.921	65.853	1.00	29.16
	ATOM	345	CA LEU	113	28.754	34.680	65.761	1.00	29.91
	ATOM	346	CB LEU	113	27.552	33.730	65.669	1.00	29.27
	ATOM	347	CG LEU	113	27.451	32.874	64.397	1.00	29.32
	ATOM	348	CD1 LEU	113	26.281	31.905	64.514	1.00	30.07
20	ATOM	349	CD2 LEU	113	27.279	33.777	63.179	1.00	29.18
	ATOM	350	C LEU	113	28.590	35.624	66.950	1.00	31.04
	ATOM	351	O LEU	113	27.976	36.685	66.831	1.00	30.89
	ATOM	352	N GLN	114	29.143	35.234	68.095	1.00	32.01
	ATOM	353	CA GLN	114	29.074	36.057	69.297	1.00	33.69
25	ATOM	354	CB GLN	114	29.403	35.218	70.537	1.00	35.55
	ATOM	355	CG GLN	114	28.383	34.113	70.801	1.00	40.14
	ATOM	356	CD GLN	114	28.764	33.207	71.960	1.00	43.52
	ATOM	357	OE1 GLN	114	28.850	33.644	73.110	1.00	44.43
	ATOM	358	NE2 GLN	114	28.996	31.932	71.658	1.00	44.83
30	ATOM	359	C GLN	114	30.060	37.208	69.157	1.00	33.40
	ATOM	360	O GLN	114	29.773	38.336	69.555	1.00	32.65
	ATOM	361	N LYS	115	31.224	36.918	68.587	1.00	33.87
	ATOM	362	CA LYS	115	32.235	37.944	68.369	1.00	33.82
	ATOM	363	CB LYS	115	33.547	37.318	67.889	1.00	36.05
35	ATOM	364	CG LYS	115	34.622	37.276	68.960	1.00	39.80
	ATOM	365	CD LYS	115	34.924	38.684	69.443	1.00	42.99
	ATOM	366	CE LYS	115	35.903	38.699	70.598	1.00	45.69
	ATOM	367	NZ LYS	115	36.078	40.092	71.099	1.00	48.43
	ATOM	368	C LYS	115	31.718	38.937	67.335	1.00	32.81
40	ATOM	369	O LYS	115	32.132	40.094	67.310	1.00	30.93
	ATOM	370	N ASN	116	30.813	38.472	66.480	1.00	32.71
	ATOM	371	CA ASN	116	30.215	39.325	65.458	1.00	33.77
	ATOM	372	CB ASN	116	29.223	38.530	64.602	1.00	34.22
	ATOM	373	CG ASN	116	29.855	37.950	63.356	1.00	35.11
45	ATOM	374	OD1 ASN	116	30.356	38.683	62.502	1.00	35.08
	ATOM	375	ND2 ASN	116	29.827	36.627	63.239	1.00	37.76
	ATOM	376	C ASN	116	29.465	40.459	66.146	1.00	33.07
	ATOM	377	O ASN	116	29.675	41.632	65.847	1.00	32.40
	ATOM	378	N MET	117	28.586	40.086	67.070	1.00	33.09
50	ATOM	379	CA MET	117	27.783	41.044	67.812	1.00	32.98
	ATOM	380	CB MET	117	26.843	40.299	68.764	1.00	34.71
	ATOM	381	CG MET	117	25.382	40.289	68.317	1.00	39.02
	ATOM	382	SD MET	117	25.127	39.995	66.544	1.00	41.96
	ATOM	383	CE MET	117	23.347	40.015	66.451	1.00	41.75
55	ATOM	384	C MET	117	28.638	42.039	68.585	1.00	31.36
	ATOM	385	O MET	117	28.287	43.212	68.697	1.00	29.55
	ATOM	386	N GLN	118	29.768	41.576	69.106	1.00	31.05
	ATOM	387	CA GLN	118	30.653	42.447	69.868	1.00	31.16
	ATOM	388	CB GLN	118	31.741	41.625	70.563	1.00	34.52
60	ATOM	389	CG GLN	118	31.195	40.567	71.509	1.00	38.71
	ATOM	390	CD GLN	118	32.270	39.974	72.402	1.00	41.62

	ATOM	391	OE1	GLN	118	33.294	39.485	66.222	1.00	43.74
	ATOM	392	NE2	GLN	118	32.039	40.013	73.711	1.00	42.41
	ATOM	393	C	GLN	118	31.298	43.519	68.999	1.00	29.23
	ATOM	394	O	GLN	118	31.318	44.698	69.365	1.00	28.92
5	ATOM	395	N	ILE	119	31.822	43.120	67.846	1.00	25.46
	ATOM	396	CA	ILE	119	32.457	44.081	66.957	1.00	24.61
	ATOM	397	CB	ILE	119	33.281	43.365	65.853	1.00	25.09
	ATOM	398	CG2	ILE	119	32.362	42.581	64.923	1.00	24.21
	ATOM	399	CG1	ILE	119	34.096	44.392	65.071	1.00	25.85
10	ATOM	400	CD1	ILE	119	35.175	43.779	64.208	1.00	26.22
	ATOM	401	C	ILE	119	31.401	44.995	66.329	1.00	22.47
	ATOM	402	O	ILE	119	31.674	46.153	66.003	1.00	22.00
	ATOM	403	N	ALA	120	30.187	44.481	66.171	1.00	21.10
	ATOM	404	CA	ALA	120	29.109	45.283	65.599	1.00	22.02
15	ATOM	405	CB	ALA	120	27.902	44.401	65.294	1.00	20.08
	ATOM	406	C	ALA	120	28.734	46.359	66.616	1.00	22.84
	ATOM	407	O	ALA	120	28.410	47.490	66.264	1.00	22.93
	ATOM	408	N	ASN	121	28.790	45.987	67.888	1.00	21.65
	ATOM	409	CA	ASN	121	28.468	46.901	68.970	1.00	23.13
20	ATOM	410	CB	ASN	121	28.572	46.166	70.300	1.00	27.59
	ATOM	411	CG	ASN	121	27.649	46.732	71.342	1.00	34.63
	ATOM	412	OD1	ASN	121	28.016	47.635	72.096	1.00	39.08
	ATOM	413	ND2	ASN	121	26.427	46.206	71.389	1.00	38.10
	ATOM	414	C	ASN	121	29.428	48.086	68.951	1.00	21.02
25	ATOM	415	O	ASN	121	29.020	49.241	69.101	1.00	20.93
	ATOM	416	N	HIS	122	30.710	47.789	68.776	1.00	17.91
	ATOM	417	CA	HIS	122	31.739	48.817	68.716	1.00	17.11
	ATOM	418	CB	HIS	122	33.122	48.152	68.661	1.00	15.18
	ATOM	419	CG	HIS	122	34.235	49.093	68.327	1.00	16.93
30	ATOM	420	CD2	HIS	122	35.035	49.844	69.119	1.00	15.16
	ATOM	421	ND1	HIS	122	34.617	49.363	67.031	1.00	18.07
	ATOM	422	CE1	HIS	122	35.606	50.240	67.041	1.00	18.19
	ATOM	423	NE2	HIS	122	35.879	50.547	68.296	1.00	15.55
	ATOM	424	C	HIS	122	31.520	49.698	67.487	1.00	17.81
35	ATOM	425	O	HIS	122	31.628	50.925	67.556	1.00	18.93
	ATOM	426	N	THR	123	31.213	49.066	66.360	1.00	17.71
	ATOM	427	CA	THR	123	30.983	49.794	65.117	1.00	18.02
	ATOM	428	CB	THR	123	30.700	48.823	63.956	1.00	17.98
	ATOM	429	OG1	THR	123	31.807	47.926	63.810	1.00	16.69
40	ATOM	430	CG2	THR	123	30.494	49.591	62.646	1.00	18.45
	ATOM	431	C	THR	123	29.808	50.758	65.260	1.00	18.44
	ATOM	432	O	THR	123	29.872	51.903	64.817	1.00	18.36
	ATOM	433	N	LEU	124	28.737	50.292	65.886	1.00	19.48
	ATOM	434	CA	LEU	124	27.556	51.123	66.083	1.00	21.69
45	ATOM	435	CB	LEU	124	26.407	50.264	66.625	1.00	22.76
	ATOM	436	CG	LEU	124	25.009	50.870	66.792	1.00	25.84
	ATOM	437	CD1	LEU	124	24.634	51.743	65.596	1.00	26.67
	ATOM	438	CD2	LEU	124	24.015	49.731	66.952	1.00	28.14
	ATOM	439	C	LEU	124	27.849	52.293	67.028	1.00	22.10
50	ATOM	440	O	LEU	124	27.395	53.414	66.805	1.00	22.48
	ATOM	441	N	LYS	125	28.619	52.029	68.077	1.00	21.30
	ATOM	442	CA	LYS	125	28.968	53.061	69.044	1.00	21.15
	ATOM	443	CB	LYS	125	29.826	52.468	70.165	1.00	22.88
	ATOM	444	CG	LYS	125	30.218	53.462	71.247	1.00	24.84
55	ATOM	445	CD	LYS	125	31.157	52.829	72.267	1.00	27.95
	ATOM	446	CE	LYS	125	31.480	53.799	73.392	1.00	30.77
	ATOM	447	NZ	LYS	125	31.992	55.102	72.875	1.00	33.91
	ATOM	448	C	LYS	125	29.727	54.203	68.377	1.00	20.96
	ATOM	449	O	LYS	125	29.344	55.367	68.492	1.00	20.95
60	ATOM	450	N	TYR	126	30.805	53.869	67.675	1.00	18.64
	ATOM	451	CA	TYR	126	31.598	54.893	67.020	1.00	17.79

	ATOM	452	TYR	126	33.026	54.388	66.700	1.00	18.37
	ATOM	453	CG TYR	126	33.817	54.315	68.071	1.00	20.45
	ATOM	454	CD1 TYR	126	33.687	53.226	68.934	1.00	20.37
	ATOM	455	CE1 TYR	126	34.326	53.209	70.171	1.00	21.90
5	ATOM	456	CD2 TYR	126	34.618	55.383	68.476	1.00	20.13
	ATOM	457	CE2 TYR	126	35.260	55.376	69.710	1.00	21.70
	ATOM	458	CZ TYR	126	35.107	54.290	70.552	1.00	21.90
	ATOM	459	OH TYR	126	35.717	54.301	71.783	1.00	22.74
	ATOM	460	C TYR	126	30.983	55.411	65.733	1.00	16.79
10	ATOM	461	O TYR	126	31.168	56.573	65.383	1.00	17.06
	ATOM	462	N GLY	127	30.239	54.554	65.038	1.00	17.21
	ATOM	463	CA GLY	127	29.596	54.977	63.806	1.00	16.33
	ATOM	464	C GLY	127	28.534	56.020	64.099	1.00	17.87
	ATOM	465	O GLY	127	28.366	56.984	63.351	1.00	17.27
15	ATOM	466	N THR	128	27.815	55.825	65.199	1.00	17.84
	ATOM	467	CA THR	128	26.774	56.759	65.607	1.00	19.72
	ATOM	468	CB THR	128	25.997	56.216	66.826	1.00	19.70
	ATOM	469	OG1 THR	128	25.413	54.951	66.487	1.00	21.12
	ATOM	470	CG2 THR	128	24.896	57.188	67.244	1.00	20.40
20	ATOM	471	C THR	128	27.409	58.107	65.958	1.00	20.53
	ATOM	472	O THR	128	26.887	59.161	65.599	1.00	20.68
	ATOM	473	N GLN	129	28.542	58.064	66.655	1.00	21.83
	ATOM	474	CA GLN	129	29.262	59.280	67.038	1.00	21.59
	ATOM	475	CB GLN	129	30.455	58.939	67.938	1.00	26.47
25	ATOM	476	CG GLN	129	30.215	59.095	69.432	1.00	31.89
	ATOM	477	CD GLN	129	31.440	58.719	70.262	1.00	34.85
	ATOM	478	OE1 GLN	129	31.608	57.567	70.666	1.00	35.57
	ATOM	479	NE2 GLN	129	32.310	59.693	70.504	1.00	36.98
	ATOM	480	C GLN	129	29.781	60.020	65.810	1.00	20.77
30	ATOM	481	O GLN	129	29.638	61.238	65.698	1.00	19.33
	ATOM	482	N ALA	130	30.389	59.270	64.896	1.00	18.52
	ATOM	483	CA ALA	130	30.956	59.831	63.673	1.00	17.79
	ATOM	484	CB ALA	130	31.622	58.722	62.858	1.00	17.56
	ATOM	485	C ALA	130	29.927	60.561	62.815	1.00	16.56
35	ATOM	486	O ALA	130	30.245	61.547	62.156	1.00	16.12
	ATOM	487	N ARG	131	28.697	60.066	62.817	1.00	17.47
	ATOM	488	CA ARG	131	27.634	60.680	62.036	1.00	19.03
	ATOM	489	CB ARG	131	26.436	59.736	61.952	1.00	18.10
	ATOM	490	CG ARG	131	26.676	58.528	61.066	1.00	18.60
40	ATOM	491	CD ARG	131	25.435	57.669	60.979	1.00	20.30
	ATOM	492	NE ARG	131	25.604	56.546	60.062	1.00	17.51
	ATOM	493	CZ ARG	131	24.642	55.679	59.766	1.00	19.71
	ATOM	494	NH1 ARG	131	23.441	55.803	60.317	1.00	17.67
	ATOM	495	NH2 ARG	131	24.877	54.692	58.910	1.00	19.33
45	ATOM	496	C ARG	131	27.188	62.030	62.599	1.00	21.80
	ATOM	497	O ARG	131	26.512	62.801	61.913	1.00	20.73
	ATOM	498	N LYS	132	27.562	62.309	63.844	1.00	22.02
	ATOM	499	CA LYS	132	27.195	63.569	64.479	1.00	24.28
	ATOM	500	CB LYS	132	27.232	63.425	66.002	1.00	25.70
50	ATOM	501	CG LYS	132	26.128	62.535	66.553	1.00	31.41
	ATOM	502	CD LYS	132	26.278	62.309	68.048	1.00	33.41
	ATOM	503	CE LYS	132	25.149	61.442	68.580	1.00	36.75
	ATOM	504	NZ LYS	132	25.398	60.989	69.977	1.00	38.85
	ATOM	505	C LYS	132	28.113	64.698	64.036	1.00	24.23
55	ATOM	506	O LYS	132	27.815	65.872	64.255	1.00	24.28
	ATOM	507	N PHE	133	29.235	64.344	63.417	1.00	25.03
	ATOM	508	CA PHE	133	30.178	65.347	62.928	1.00	26.68
	ATOM	509	CB PHE	133	31.606	64.786	62.822	1.00	26.18
	ATOM	510	CG PHE	133	32.297	64.597	64.140	1.00	26.01
60	ATOM	511	CD1 PHE	133	32.189	63.396	64.833	1.00	26.90
	ATOM	512	CD2 PHE	133	33.063	65.625	64.686	1.00	27.15

	ATOM	513	CE1	PHE	133	32.837	63.218	65.057	1.00	28.34
	ATOM	514	CE2	PHE	133	33.714	65.461	65.909	1.00	26.84
	ATOM	515	CZ	PHE	133	33.602	64.256	66.595	1.00	27.99
	ATOM	516	C	PHE	133	29.766	65.801	61.540	1.00	27.95
5	ATOM	517	O	PHE	133	29.350	64.989	60.714	1.00	28.75
	ATOM	518	N	ASP	134	29.876	67.099	61.281	1.00	29.55
	ATOM	519	CA	ASP	134	29.561	67.611	59.957	1.00	30.26
	ATOM	520	CB	ASP	134	29.048	69.051	60.007	1.00	32.19
	ATOM	521	CG	ASP	134	28.560	69.538	58.648	1.00	32.97
10	ATOM	522	OD1	ASP	134	29.035	69.008	57.620	1.00	33.76
	ATOM	523	OD2	ASP	134	27.710	70.450	58.602	1.00	35.71
	ATOM	524	C	ASP	134	30.896	67.577	59.231	1.00	30.16
	ATOM	525	O	ASP	134	31.721	68.478	59.381	1.00	30.39
	ATOM	526	N	VAL	135	31.110	66.522	58.457	1.00	31.36
15	ATOM	527	CA	VAL	135	32.353	66.354	57.722	1.00	31.74
	ATOM	528	CB	VAL	135	32.308	65.059	56.880	1.00	32.36
	ATOM	529	CG1	VAL	135	33.587	64.904	56.083	1.00	33.06
	ATOM	530	CG2	VAL	135	32.113	63.864	57.794	1.00	31.68
	ATOM	531	C	VAL	135	32.660	67.549	56.820	1.00	32.14
20	ATOM	532	O	VAL	135	33.824	67.884	56.599	1.00	32.77
	ATOM	533	N	ASN	136	31.615	68.194	56.310	1.00	32.14
	ATOM	534	CA	ASN	136	31.790	69.346	55.432	1.00	34.09
	ATOM	535	CB	ASN	136	30.430	69.871	54.961	1.00	34.55
	ATOM	536	CG	ASN	136	29.697	68.881	54.079	1.00	36.54
25	ATOM	537	OD1	ASN	136	30.246	68.397	53.089	1.00	34.66
	ATOM	538	ND2	ASN	136	28.449	68.575	54.433	1.00	35.78
	ATOM	539	C	ASN	136	32.555	70.478	56.103	1.00	34.86
	ATOM	540	O	ASN	136	33.238	71.251	55.436	1.00	34.66
	ATOM	541	N	GLN	137	32.445	70.568	57.424	1.00	36.37
30	ATOM	542	CA	GLN	137	33.114	71.628	58.171	1.00	37.67
	ATOM	543	CB	GLN	137	32.192	72.122	59.290	1.00	40.06
	ATOM	544	CG	GLN	137	30.886	72.738	58.797	1.00	43.99
	ATOM	545	CD	GLN	137	31.108	73.973	57.939	1.00	47.20
	ATOM	546	OE1	GLN	137	31.777	74.922	58.355	1.00	49.72
35	ATOM	547	NE2	GLN	137	30.540	73.970	56.736	1.00	49.42
	ATOM	548	C	GLN	137	34.471	71.237	58.756	1.00	36.89
	ATOM	549	O	GLN	137	35.136	72.057	59.389	1.00	36.28
	ATOM	550	N	LEU	138	34.886	69.992	58.539	1.00	36.72
	ATOM	551	CA	LEU	138	36.162	69.516	59.061	1.00	35.87
40	ATOM	552	CB	LEU	138	36.140	67.991	59.166	1.00	36.10
	ATOM	553	CG	LEU	138	36.216	67.413	60.585	1.00	36.93
	ATOM	554	CD1	LEU	138	35.438	68.279	61.565	1.00	36.66
	ATOM	555	CD2	LEU	138	35.678	65.994	60.576	1.00	37.81
	ATOM	556	C	LEU	138	37.330	69.980	58.198	1.00	36.49
45	ATOM	557	O	LEU	138	37.350	69.764	56.987	1.00	37.24
	ATOM	558	N	GLN	139	38.310	70.612	58.837	1.00	36.86
	ATOM	559	CA	GLN	139	39.476	71.144	58.140	1.00	37.44
	ATOM	560	CB	GLN	139	40.141	72.224	58.995	1.00	39.57
	ATOM	561	CG	GLN	139	40.513	73.479	58.225	1.00	43.68
50	ATOM	562	CD	GLN	139	39.295	74.262	57.761	1.00	46.04
	ATOM	563	OE1	GLN	139	38.423	73.729	57.070	1.00	48.18
	ATOM	564	NE2	GLN	139	39.230	75.535	58.138	1.00	46.25
	ATOM	565	C	GLN	139	40.516	70.094	57.755	1.00	36.44
	ATOM	566	O	GLN	139	40.868	69.970	56.583	1.00	37.59
55	ATOM	567	N	ASN	140	41.016	69.353	58.739	1.00	35.34
	ATOM	568	CA	ASN	140	42.018	68.320	58.486	1.00	34.29
	ATOM	569	CB	ASN	140	42.428	67.659	59.807	1.00	35.01
	ATOM	570	CG	ASN	140	43.640	66.763	59.660	1.00	36.54
	ATOM	571	OD1	ASN	140	43.676	65.880	58.801	1.00	37.38
60	ATOM	572	ND2	ASN	140	44.643	66.982	60.504	1.00	38.59
	ATOM	573	C	ASN	140	41.443	67.273	57.529	1.00	33.04

	ATOM		O	ASN	140	40.438	66.632		338	1.00	32.86
	ATOM	575	N	THR	141	42.082	67.094		56.376	1.00	31.07
	ATOM	576	CA	THR	141	41.599	66.135		55.386	1.00	30.83
	ATOM	577	CB	THR	141	42.347	66.287		54.038	1.00	31.28
5	ATOM	578	OG1	THR	141	43.753	66.108		54.238	1.00	31.57
	ATOM	579	CG2	THR	141	42.089	67.668		53.438	1.00	31.26
	ATOM	580	C	THR	141	41.681	64.674		55.835	1.00	30.16
	ATOM	581	O	THR	141	40.809	63.875		55.504	1.00	30.19
	ATOM	582	N	THR	142	42.722	64.323		56.582	1.00	29.65
10	ATOM	583	CA	THR	142	42.866	62.951		57.061	1.00	28.87
	ATOM	584	CB	THR	142	44.242	62.733		57.722	1.00	30.00
	ATOM	585	OG1	THR	142	45.266	62.851		56.726	1.00	31.45
	ATOM	586	CG2	THR	142	44.324	61.354		58.366	1.00	29.44
	ATOM	587	C	THR	142	41.760	62.627		58.064	1.00	27.94
15	ATOM	588	O	THR	142	41.151	61.558		58.005	1.00	27.97
	ATOM	589	N	ILE	143	41.499	63.555		58.979	1.00	25.97
	ATOM	590	CA	ILE	143	40.451	63.367		59.979	1.00	25.63
	ATOM	591	CB	ILE	143	40.415	64.552		60.975	1.00	26.33
	ATOM	592	CG2	ILE	143	39.202	64.438		61.888	1.00	24.81
20	ATOM	593	CG1	ILE	143	41.709	64.584		61.792	1.00	27.36
	ATOM	594	CD1	ILE	143	41.941	63.340		62.619	1.00	29.54
	ATOM	595	C	ILE	143	39.101	63.283		59.273	1.00	25.21
	ATOM	596	O	ILE	143	38.248	62.463		59.612	1.00	24.06
	ATOM	597	N	LYS	144	38.930	64.153		58.285	1.00	24.13
25	ATOM	598	CA	LYS	144	37.716	64.237		57.489	1.00	23.56
	ATOM	599	CB	LYS	144	37.868	65.405		56.502	1.00	25.02
	ATOM	600	CG	LYS	144	36.692	65.695		55.598	1.00	27.86
	ATOM	601	CD	LYS	144	36.894	67.050		54.915	1.00	31.18
	ATOM	602	CE	LYS	144	35.905	67.295		53.782	1.00	32.81
30	ATOM	603	NZ	LYS	144	34.486	67.288		54.224	1.00	35.78
	ATOM	604	C	LYS	144	37.468	62.918		56.752	1.00	22.05
	ATOM	605	O	LYS	144	36.349	62.402		56.734	1.00	22.03
	ATOM	606	N	ARG	145	38.524	62.371		56.164	1.00	21.34
	ATOM	607	CA	ARG	145	38.435	61.118		55.421	1.00	20.58
35	ATOM	608	CB	ARG	145	39.750	60.871		54.676	1.00	20.47
	ATOM	609	CG	ARG	145	39.747	59.672		53.734	1.00	19.28
	ATOM	610	CD	ARG	145	41.005	59.671		52.875	1.00	17.58
	ATOM	611	NE	ARG	145	41.122	58.488		52.023	1.00	16.82
	ATOM	612	CZ	ARG	145	40.350	58.238		50.969	1.00	18.88
40	ATOM	613	NH1	ARG	145	39.391	59.092		50.627	1.00	18.08
	ATOM	614	NH2	ARG	145	40.541	57.133		50.252	1.00	15.35
	ATOM	615	C	ARG	145	38.119	59.933		56.337	1.00	21.54
	ATOM	616	O	ARG	145	37.294	59.081		56.002	1.00	19.52
	ATOM	617	N	ILE	146	38.775	59.880		57.493	1.00	20.89
45	ATOM	618	CA	ILE	146	38.543	58.793		58.436	1.00	20.61
	ATOM	619	CB	ILE	146	39.550	58.843		59.611	1.00	20.86
	ATOM	620	CG2	ILE	146	39.105	57.904		60.729	1.00	18.26
	ATOM	621	CG1	ILE	146	40.942	58.445		59.109	1.00	21.92
	ATOM	622	CD1	ILE	146	42.034	58.531		60.163	1.00	23.09
50	ATOM	623	C	ILE	146	37.124	58.833		58.991	1.00	20.19
	ATOM	624	O	ILE	146	36.433	57.814		59.024	1.00	20.23
	ATOM	625	N	ILE	147	36.687	60.013		59.416	1.00	19.22
	ATOM	626	CA	ILE	147	35.352	60.161		59.973	1.00	19.37
	ATOM	627	CB	ILE	147	35.132	61.590		60.536	1.00	19.10
55	ATOM	628	CG2	ILE	147	33.657	61.806		60.859	1.00	19.65
	ATOM	629	CG1	ILE	147	35.991	61.780		61.794	1.00	18.67
	ATOM	630	CD1	ILE	147	35.771	63.090		62.519	1.00	20.74
	ATOM	631	C	ILE	147	34.259	59.820		58.960	1.00	18.50
	ATOM	632	O	ILE	147	33.278	59.166		59.305	1.00	16.03
60	ATOM	633	N	ALA	148	34.426	60.259		57.716	1.00	19.76
	ATOM	634	CA	ALA	148	33.432	59.961		56.685	1.00	20.41

	ATOM		CB	ALA	148	33.838	60.592	348	1.00	19.63
	ATOM	636	C	ALA	148	33.305	58.447	56.535	1.00	19.95
	ATOM	637	O	ALA	148	32.203	57.917	56.406	1.00	21.03
	ATOM	638	N	LYS	149	34.438	57.752	56.566	1.00	19.67
5	ATOM	639	CA	LYS	149	34.446	56.300	56.435	1.00	19.12
	ATOM	640	CB	LYS	149	35.886	55.802	56.246	1.00	21.29
	ATOM	641	CG	LYS	149	36.016	54.302	55.997	1.00	25.45
	ATOM	642	CD	LYS	149	37.389	53.971	55.418	1.00	29.29
	ATOM	643	CE	LYS	149	37.511	52.506	55.013	1.00	29.09
10	ATOM	644	NZ	LYS	149	37.592	51.592	56.184	1.00	31.55
	ATOM	645	C	LYS	149	33.802	55.601	57.633	1.00	18.43
	ATOM	646	O	LYS	149	33.088	54.606	57.469	1.00	18.62
	ATOM	647	N	VAL	150	34.042	56.122	58.835	1.00	17.00
	ATOM	648	CA	VAL	150	33.475	55.528	60.041	1.00	16.77
15	ATOM	649	CB	VAL	150	34.145	56.106	61.316	1.00	18.58
	ATOM	650	CG1	VAL	150	33.532	55.480	62.573	1.00	17.11
	ATOM	651	CG2	VAL	150	35.641	55.825	61.276	1.00	17.68
	ATOM	652	C	VAL	150	31.956	55.701	60.127	1.00	15.66
	ATOM	653	O	VAL	150	31.291	54.974	60.861	1.00	14.92
20	ATOM	654	N	GLN	151	31.407	56.656	59.379	1.00	15.58
	ATOM	655	CA	GLN	151	29.958	56.875	59.371	1.00	16.33
	ATOM	656	CB	GLN	151	29.608	58.196	58.674	1.00	17.28
	ATOM	657	CG	GLN	151	30.272	59.437	59.263	1.00	19.28
	ATOM	658	CD	GLN	151	29.802	60.723	58.597	1.00	22.98
25	ATOM	659	OE1	GLN	151	29.570	60.758	57.388	1.00	24.55
	ATOM	660	NE2	GLN	151	29.677	61.790	59.381	1.00	23.47
	ATOM	661	C	GLN	151	29.237	55.719	58.656	1.00	16.52
	ATOM	662	O	GLN	151	28.014	55.595	58.732	1.00	16.41
	ATOM	663	N	ASP	152	29.997	54.887	57.950	1.00	14.56
30	ATOM	664	CA	ASP	152	29.436	53.732	57.242	1.00	16.29
	ATOM	665	CB	ASP	152	30.237	53.457	55.965	1.00	15.31
	ATOM	666	CG	ASP	152	29.661	52.317	55.131	1.00	17.15
	ATOM	667	OD1	ASP	152	28.797	51.560	55.623	1.00	16.35
	ATOM	668	OD2	ASP	152	30.095	52.172	53.970	1.00	18.62
35	ATOM	669	C	ASP	152	29.552	52.545	58.198	1.00	16.49
	ATOM	670	O	ASP	152	30.641	52.022	58.408	1.00	16.64
	ATOM	671	N	LEU	153	28.429	52.126	58.772	1.00	17.15
	ATOM	672	CA	LEU	153	28.423	51.023	59.731	1.00	18.78
	ATOM	673	CB	LEU	153	27.197	51.122	60.640	1.00	19.19
40	ATOM	674	CG	LEU	153	26.729	52.501	61.112	1.00	22.36
	ATOM	675	CD1	LEU	153	25.611	52.330	62.137	1.00	22.96
	ATOM	676	CD2	LEU	153	27.881	53.260	61.715	1.00	20.38
	ATOM	677	C	LEU	153	28.417	49.650	59.080	1.00	18.93
	ATOM	678	O	LEU	153	28.600	48.635	59.756	1.00	18.52
45	ATOM	679	N	GLU	154	28.207	49.617	57.769	1.00	19.03
	ATOM	680	CA	GLU	154	28.133	48.360	57.049	1.00	19.00
	ATOM	681	CB	GLU	154	29.505	47.674	57.033	1.00	23.48
	ATOM	682	CG	GLU	154	30.375	48.165	55.867	1.00	32.92
	ATOM	683	CD	GLU	154	31.838	47.766	55.981	1.00	38.33
50	ATOM	684	OE1	GLU	154	32.122	46.597	56.317	1.00	44.51
	ATOM	685	OE2	GLU	154	32.709	48.622	55.720	1.00	42.26
	ATOM	686	C	GLU	154	27.046	47.508	57.704	1.00	16.46
	ATOM	687	O	GLU	154	25.984	48.038	58.020	1.00	16.75
	ATOM	688	N	ARG	155	27.285	46.220	57.939	1.00	14.21
55	ATOM	689	CA	ARG	155	26.238	45.381	58.525	1.00	15.38
	ATOM	690	CB	ARG	155	26.698	43.921	58.607	1.00	16.09
	ATOM	691	CG	ARG	155	27.670	43.615	59.735	1.00	14.62
	ATOM	692	CD	ARG	155	28.101	42.156	59.685	1.00	16.01
	ATOM	693	NE	ARG	155	28.976	41.887	58.550	1.00	18.81
60	ATOM	694	CZ	ARG	155	29.461	40.686	58.244	1.00	21.66
	ATOM	695	NH1	ARG	155	29.150	39.629	58.989	1.00	20.13

	ATOM	696	ARG	155	30.274	40.547	57.1	1.00	22.28
	ATOM	697	ARG	155	25.728	45.838	59.896	1.00	16.17
	ATOM	698	ARG	155	24.567	45.602	60.246	1.00	15.50
	ATOM	699	ALA	156	26.586	46.496	60.668	1.00	17.02
5	ATOM	700	ALA	156	26.185	46.963	61.994	1.00	18.35
	ATOM	701	ALA	156	27.380	47.563	62.722	1.00	17.23
	ATOM	702	ALA	156	25.031	47.969	61.954	1.00	19.07
	ATOM	703	ALA	156	24.495	48.341	62.997	1.00	19.97
	ATOM	704	ALA	157	24.645	48.409	60.759	1.00	17.62
10	ATOM	705	ALA	157	23.534	49.354	60.635	1.00	17.85
	ATOM	706	ALA	157	23.620	50.104	59.311	1.00	15.36
	ATOM	707	ALA	157	22.186	48.647	60.739	1.00	17.21
	ATOM	708	ALA	157	21.155	49.286	60.946	1.00	18.26
	ATOM	709	LEU	158	22.197	47.327	60.591	1.00	17.55
15	ATOM	710	LEU	158	20.970	46.536	60.656	1.00	17.62
	ATOM	711	LEU	158	21.209	45.132	60.090	1.00	16.43
	ATOM	712	LEU	158	21.510	44.911	58.609	1.00	15.07
	ATOM	713	LEU	158	21.931	43.465	58.404	1.00	15.08
	ATOM	714	LEU	158	20.282	45.243	57.777	1.00	13.17
20	ATOM	715	LEU	158	20.430	46.377	62.073	1.00	17.49
	ATOM	716	LEU	158	21.196	46.258	63.020	1.00	18.06
	ATOM	717	PRO	159	19.096	46.374	62.229	1.00	18.66
	ATOM	718	PRO	159	18.053	46.623	61.215	1.00	18.39
	ATOM	719	PRO	159	18.508	46.207	63.561	1.00	18.87
25	ATOM	720	PRO	159	17.014	46.153	63.273	1.00	19.07
	ATOM	721	PRO	159	16.873	47.046	62.062	1.00	20.37
	ATOM	722	PRO	159	19.038	44.877	64.098	1.00	20.43
	ATOM	723	PRO	159	19.318	43.966	63.317	1.00	20.96
	ATOM	724	ALA	160	19.183	44.770	65.415	1.00	20.67
30	ATOM	725	ALA	160	19.698	43.560	66.052	1.00	21.14
	ATOM	726	ALA	160	19.397	43.600	67.554	1.00	20.94
	ATOM	727	ALA	160	19.183	42.246	65.459	1.00	21.41
	ATOM	728	ALA	160	19.958	41.329	65.193	1.00	20.22
	ATOM	729	GLN	161	17.873	42.154	65.261	1.00	22.76
35	ATOM	730	GLN	161	17.268	40.941	64.724	1.00	24.75
	ATOM	731	GLN	161	15.749	41.106	64.668	1.00	27.09
	ATOM	732	GLN	161	14.993	39.854	64.268	1.00	34.37
	ATOM	733	GLN	161	13.498	39.986	64.496	1.00	38.16
	ATOM	734	GLN	161	13.044	40.152	65.631	1.00	40.84
40	ATOM	735	GLN	161	12.724	39.914	63.417	1.00	39.81
	ATOM	736	GLN	161	17.813	40.579	63.340	1.00	24.20
	ATOM	737	GLN	161	18.220	39.437	63.105	1.00	22.98
	ATOM	738	GLU	162	17.822	41.550	62.432	1.00	22.26
	ATOM	739	GLU	162	18.323	41.330	61.079	1.00	23.01
45	ATOM	740	GLU	162	18.034	42.545	60.187	1.00	25.38
	ATOM	741	GLU	162	16.629	42.608	59.583	1.00	30.24
	ATOM	742	GLU	162	15.545	42.908	60.604	1.00	33.50
	ATOM	743	GLU	162	15.246	42.031	61.441	1.00	37.24
	ATOM	744	GLU	162	14.989	44.025	60.564	1.00	35.02
50	ATOM	745	GLU	162	19.827	41.053	61.066	1.00	20.41
	ATOM	746	GLU	162	20.311	40.262	60.262	1.00	19.24
	ATOM	747	LEU	163	20.567	41.705	61.956	1.00	20.49
	ATOM	748	LEU	163	22.008	41.504	62.001	1.00	19.77
	ATOM	749	LEU	163	22.655	42.455	63.013	1.00	19.73
55	ATOM	750	LEU	163	24.177	42.335	63.191	1.00	20.15
	ATOM	751	LEU	163	24.890	42.506	61.856	1.00	20.35
	ATOM	752	LEU	163	24.651	43.385	64.183	1.00	20.52
	ATOM	753	LEU	163	22.373	40.062	62.336	1.00	20.22
	ATOM	754	LEU	163	23.242	39.469	61.690	1.00	18.49
60	ATOM	755	GLU	164	21.715	39.487	63.338	1.00	21.24
	ATOM	756	GLU	164	22.033	38.114	63.702	1.00	22.56

	ATOM	757	CB	GLU	164	21.368	37.715	65.031	1.00	25.63
	ATOM	758	CG	GLU	164	19.931	37.253	64.946	1.00	32.73
	ATOM	759	CD	GLU	164	19.410	36.719	66.280	1.00	36.98
	ATOM	760	OE1	GLU	164	18.266	36.215	66.315	1.00	39.72
5	ATOM	761	OE2	GLU	164	20.141	36.805	67.292	1.00	37.47
	ATOM	762	C	GLU	164	21.629	37.159	62.583	1.00	19.87
	ATOM	763	O	GLU	164	22.330	36.191	62.309	1.00	19.06
	ATOM	764	N	GLU	165	20.511	37.436	61.923	1.00	18.96
	ATOM	765	CA	GLU	165	20.076	36.575	60.829	1.00	19.42
10	ATOM	766	CB	GLU	165	18.677	36.962	60.354	1.00	19.49
	ATOM	767	CG	GLU	165	18.230	36.176	59.138	1.00	22.13
	ATOM	768	CD	GLU	165	16.817	36.502	58.721	1.00	23.77
	ATOM	769	OE1	GLU	165	16.368	37.642	58.976	1.00	25.48
	ATOM	770	OE2	GLU	165	16.163	35.622	58.122	1.00	23.74
15	ATOM	771	C	GLU	165	21.069	36.659	59.664	1.00	19.62
	ATOM	772	O	GLU	165	21.405	35.645	59.050	1.00	19.06
	ATOM	773	N	TYR	166	21.536	37.869	59.372	1.00	18.74
	ATOM	774	CA	TYR	166	22.499	38.083	58.298	1.00	19.37
	ATOM	775	CB	TYR	166	22.767	39.579	58.117	1.00	18.92
20	ATOM	776	CG	TYR	166	23.762	39.899	57.021	1.00	18.54
	ATOM	777	CD1	TYR	166	23.522	39.516	55.699	1.00	17.98
	ATOM	778	CE1	TYR	166	24.431	39.816	54.685	1.00	18.12
	ATOM	779	CD2	TYR	166	24.938	40.591	57.302	1.00	19.19
	ATOM	780	CE2	TYR	166	25.853	40.898	56.296	1.00	19.67
25	ATOM	781	CZ	TYR	166	25.593	40.508	54.992	1.00	19.53
	ATOM	782	OH	TYR	166	26.492	40.814	53.997	1.00	20.23
	ATOM	783	C	TYR	166	23.815	37.365	58.603	1.00	19.45
	ATOM	784	O	TYR	166	24.375	36.681	57.742	1.00	17.70
	ATOM	785	N	ASN	167	24.313	37.524	59.827	1.00	19.79
30	ATOM	786	CA	ASN	167	25.563	36.874	60.197	1.00	19.29
	ATOM	787	CB	ASN	167	25.980	37.248	61.623	1.00	20.64
	ATOM	788	CG	ASN	167	26.480	38.678	61.729	1.00	21.06
	ATOM	789	OD1	ASN	167	27.214	39.156	60.864	1.00	22.90
	ATOM	790	ND2	ASN	167	26.096	39.361	62.798	1.00	20.86
35	ATOM	791	C	ASN	167	25.448	35.364	60.077	1.00	19.16
	ATOM	792	O	ASN	167	26.378	34.706	59.619	1.00	19.57
	ATOM	793	N	LYS	168	24.308	34.813	60.483	1.00	19.46
	ATOM	794	CA	LYS	168	24.116	33.370	60.403	1.00	20.23
	ATOM	795	CB	LYS	168	22.864	32.929	61.172	1.00	20.58
40	ATOM	796	CG	LYS	168	22.625	31.428	61.056	1.00	24.70
	ATOM	797	CD	LYS	168	21.400	30.961	61.813	1.00	28.42
	ATOM	798	CE	LYS	168	21.048	29.527	61.414	1.00	30.39
	ATOM	799	NZ	LYS	168	22.235	28.626	61.471	1.00	30.19
	ATOM	800	C	LYS	168	24.006	32.930	58.950	1.00	18.98
45	ATOM	801	O	LYS	168	24.485	31.859	58.580	1.00	17.60
	ATOM	802	N	ILE	169	23.363	33.760	58.135	1.00	18.74
	ATOM	803	CA	ILE	169	23.213	33.473	56.715	1.00	19.75
	ATOM	804	CB	ILE	169	22.464	34.615	55.987	1.00	20.57
	ATOM	805	CG2	ILE	169	22.651	34.489	54.480	1.00	22.22
50	ATOM	806	CG1	ILE	169	20.975	34.585	56.341	1.00	23.21
	ATOM	807	CD1	ILE	169	20.236	33.385	55.798	1.00	23.57
	ATOM	808	C	ILE	169	24.603	33.331	56.096	1.00	17.44
	ATOM	809	O	ILE	169	24.903	32.337	55.443	1.00	17.43
	ATOM	810	N	LEU	170	25.445	34.338	56.305	1.00	16.93
55	ATOM	811	CA	LEU	170	26.802	34.321	55.771	1.00	17.48
	ATOM	812	CB	LEU	170	27.555	35.582	56.195	1.00	16.14
	ATOM	813	CG	LEU	170	27.069	36.914	55.617	1.00	16.26
	ATOM	814	CD1	LEU	170	27.899	38.051	56.203	1.00	15.60
	ATOM	815	CD2	LEU	170	27.182	36.895	54.098	1.00	15.95
60	ATOM	816	C	LEU	170	27.561	33.091	56.257	1.00	19.23
	ATOM	817	O	LEU	170	28.222	32.398	55.479	1.00	18.65

	ATOM	818	LEU	171	27.464	32.827	57.103	1.00	19.55	
	ATOM	819	CA	LEU	171	28.135	31.687	58.150	1.00	20.58
	ATOM	820	CB	LEU	171	27.824	31.621	59.647	1.00	23.73
	ATOM	821	CG	LEU	171	28.435	30.447	60.413	1.00	27.50
5	ATOM	822	CD1	LEU	171	29.939	30.625	60.513	1.00	27.87
	ATOM	823	CD2	LEU	171	27.812	30.371	61.801	1.00	30.52
	ATOM	824	C	LEU	171	27.698	30.386	57.481	1.00	20.07
	ATOM	825	O	LEU	171	28.537	29.561	57.109	1.00	20.05
	ATOM	826	N	ASP	172	26.389	30.206	57.328	1.00	17.76
10	ATOM	827	CA	ASP	172	25.864	28.988	56.723	1.00	18.58
	ATOM	828	CB	ASP	172	24.336	28.926	56.843	1.00	19.17
	ATOM	829	CG	ASP	172	23.859	28.732	58.280	1.00	20.25
	ATOM	830	OD1	ASP	172	24.644	28.263	59.129	1.00	20.96
	ATOM	831	OD2	ASP	172	22.680	29.035	58.554	1.00	22.31
15	ATOM	832	C	ASP	172	26.267	28.823	55.260	1.00	18.13
	ATOM	833	O	ASP	172	26.537	27.709	54.819	1.00	18.79
	ATOM	834	N	MET	173	26.301	29.915	54.501	1.00	17.04
	ATOM	835	CA	MET	173	26.695	29.810	53.098	1.00	16.32
	ATOM	836	CB	MET	173	26.486	31.141	52.354	1.00	13.73
20	ATOM	837	CG	MET	173	25.021	31.532	52.178	1.00	13.28
	ATOM	838	SD	MET	173	24.730	32.777	50.896	1.00	14.85
	ATOM	839	CE	MET	173	25.634	34.204	51.591	1.00	10.81
	ATOM	840	C	MET	173	28.159	29.388	52.998	1.00	16.03
	ATOM	841	O	MET	173	28.510	28.516	52.205	1.00	15.12
25	ATOM	842	N	GLU	174	29.008	30.003	53.812	1.00	16.72
	ATOM	843	CA	GLU	174	30.430	29.686	53.796	1.00	20.27
	ATOM	844	CB	GLU	174	31.197	30.594	54.757	1.00	22.24
	ATOM	845	CG	GLU	174	32.675	30.254	54.819	1.00	28.10
	ATOM	846	CD	GLU	174	33.359	30.397	53.470	1.00	31.42
30	ATOM	847	OE1	GLU	174	33.614	31.552	53.059	1.00	33.86
	ATOM	848	OE2	GLU	174	33.631	29.361	52.817	1.00	30.70
	ATOM	849	C	GLU	174	30.692	28.233	54.171	1.00	19.72
	ATOM	850	O	GLU	174	31.497	27.551	53.533	1.00	19.19
	ATOM	851	N	THR	175	30.016	27.770	55.216	1.00	19.54
35	ATOM	852	CA	THR	175	30.176	26.401	55.686	1.00	19.81
	ATOM	853	CB	THR	175	29.389	26.174	56.991	1.00	20.87
	ATOM	854	OG1	THR	175	29.833	27.111	57.978	1.00	22.15
	ATOM	855	CG2	THR	175	29.613	24.761	57.513	1.00	23.20
	ATOM	856	C	THR	175	29.694	25.414	54.635	1.00	19.62
40	ATOM	857	O	THR	175	30.392	24.447	54.315	1.00	21.27
	ATOM	858	N	THR	176	28.501	25.660	54.101	1.00	16.70
	ATOM	859	CA	THR	176	27.923	24.794	53.076	1.00	16.77
	ATOM	860	CB	THR	176	26.594	25.375	52.546	1.00	17.25
	ATOM	861	OG1	THR	176	25.646	25.467	53.620	1.00	16.27
45	ATOM	862	CG2	THR	176	26.028	24.488	51.428	1.00	13.62
	ATOM	863	C	THR	176	28.882	24.620	51.895	1.00	16.32
	ATOM	864	O	THR	176	29.088	23.512	51.408	1.00	17.12
	ATOM	865	N	TYR	177	29.467	25.720	51.439	1.00	16.42
	ATOM	866	CA	TYR	177	30.396	25.675	50.316	1.00	17.56
50	ATOM	867	CB	TYR	177	30.773	27.103	49.885	1.00	15.76
	ATOM	868	CG	TYR	177	31.734	27.166	48.708	1.00	15.72
	ATOM	869	CD1	TYR	177	31.265	27.155	47.392	1.00	14.57
	ATOM	870	CE1	TYR	177	32.152	27.198	46.301	1.00	14.15
	ATOM	871	CD2	TYR	177	33.114	27.220	48.912	1.00	15.54
55	ATOM	872	CE2	TYR	177	34.009	27.259	47.834	1.00	12.96
	ATOM	873	CZ	TYR	177	33.521	27.248	46.534	1.00	15.16
	ATOM	874	OH	TYR	177	34.402	27.283	45.477	1.00	14.20
	ATOM	875	C	TYR	177	31.673	24.897	50.651	1.00	18.31
	ATOM	876	O	TYR	177	32.072	23.998	49.913	1.00	18.88
60	ATOM	877	N	SER	178	32.304	25.251	51.768	1.00	18.65
	ATOM	878	CA	SER	178	33.555	24.628	52.188	1.00	20.78

	ATOM	880	CB	SER	178	34.201	25.451	52.006	1.00	21.43
	ATOM	880	OG	SER	178	34.760	26.650	52.796	1.00	24.23
	ATOM	881	C	SER	178	33.522	23.163	52.613	1.00	21.32
	ATOM	882	O	SER	178	34.577	22.541	52.739	1.00	21.59
5	ATOM	883	N	VAL	179	32.338	22.604	52.835	1.00	20.55
	ATOM	884	CA	VAL	179	32.253	21.206	53.242	1.00	21.42
	ATOM	885	CB	VAL	179	31.541	21.049	54.616	1.00	23.05
	ATOM	886	CG1	VAL	179	32.268	21.866	55.672	1.00	21.20
	ATOM	887	CG2	VAL	179	30.085	21.474	54.509	1.00	22.91
10	ATOM	888	C	VAL	179	31.527	20.337	52.218	1.00	21.32
	ATOM	889	O	VAL	179	31.367	19.135	52.421	1.00	21.62
	ATOM	890	N	ALA	180	31.106	20.941	51.113	1.00	20.29
	ATOM	891	CA	ALA	180	30.393	20.203	50.081	1.00	19.37
	ATOM	892	CB	ALA	180	29.855	21.169	49.026	1.00	18.54
15	ATOM	893	C	ALA	180	31.285	19.157	49.424	1.00	18.64
	ATOM	894	O	ALA	180	32.479	19.384	49.224	1.00	19.38
	ATOM	895	N	THR	181	30.692	18.013	49.095	1.00	19.37
	ATOM	896	CA	THR	181	31.413	16.925	48.442	1.00	20.39
	ATOM	897	CB	THR	181	31.749	15.781	49.434	1.00	21.11
20	ATOM	898	OG1	THR	181	30.534	15.211	49.931	1.00	24.35
	ATOM	899	CG2	THR	181	32.576	16.301	50.603	1.00	21.45
	ATOM	900	C	THR	181	30.579	16.334	47.309	1.00	19.99
	ATOM	901	O	THR	181	29.353	16.463	47.288	1.00	18.79
	ATOM	902	N	VAL	182	31.257	15.694	46.362	1.00	20.53
25	ATOM	903	CA	VAL	182	30.601	15.053	45.227	1.00	20.87
	ATOM	904	CB	VAL	182	31.084	15.655	43.890	1.00	18.48
	ATOM	905	CG1	VAL	182	30.321	15.021	42.724	1.00	18.85
	ATOM	906	CG2	VAL	182	30.882	17.166	43.897	1.00	16.20
	ATOM	907	C	VAL	182	30.987	13.584	45.307	1.00	22.10
30	ATOM	908	O	VAL	182	32.167	13.249	45.261	1.00	21.07
	ATOM	909	N	CYS	183	29.989	12.714	45.435	1.00	26.01
	ATOM	910	CA	CYS	183	30.247	11.285	45.580	1.00	29.42
	ATOM	911	C	CYS	183	29.855	10.406	44.398	1.00	31.72
	ATOM	912	O	CYS	183	28.976	10.755	43.607	1.00	31.89
35	ATOM	913	CB	CYS	183	29.514	10.743	46.811	1.00	28.21
	ATOM	914	SG	CYS	183	29.634	11.717	48.345	1.00	30.87
	ATOM	915	N	HIS	184	30.518	9.252	44.310	1.00	35.55
	ATOM	916	CA	HIS	184	30.247	8.250	43.284	1.00	37.73
	ATOM	917	CB	HIS	184	31.542	7.526	42.894	1.00	38.32
40	ATOM	918	CG	HIS	184	32.423	8.311	41.970	1.00	39.50
	ATOM	919	CD2	HIS	184	33.641	8.871	42.163	1.00	40.09
	ATOM	920	ND1	HIS	184	32.082	8.580	40.661	1.00	39.50
	ATOM	921	CE1	HIS	184	33.053	9.267	40.087	1.00	40.74
	ATOM	922	NE2	HIS	184	34.012	9.456	40.977	1.00	41.17
45	ATOM	923	C	HIS	184	29.267	7.251	43.896	1.00	39.60
	ATOM	924	O	HIS	184	29.012	7.282	45.095	1.00	38.09
	ATOM	925	N	PRO	185	28.712	6.348	43.082	1.00	42.45
	ATOM	926	CD	PRO	185	28.759	6.347	41.608	1.00	43.76
	ATOM	927	CA	PRO	185	27.762	5.347	43.588	1.00	43.42
50	ATOM	928	CB	PRO	185	27.433	4.539	42.341	1.00	44.10
	ATOM	929	CG	PRO	185	27.503	5.614	41.253	1.00	44.49
	ATOM	930	C	PRO	185	28.305	4.467	44.722	1.00	44.53
	ATOM	931	O	PRO	185	27.545	3.951	45.540	1.00	44.42
	ATOM	932	N	ASN	186	29.617	4.276	44.744	1.00	46.05
55	ATOM	933	CA	ASN	186	30.217	3.474	45.795	1.00	47.57
	ATOM	934	CB	ASN	186	31.688	3.146	45.466	1.00	48.59
	ATOM	935	CG	ASN	186	32.413	4.289	44.776	1.00	49.30
	ATOM	936	OD1	ASN	186	32.309	5.433	45.193	1.00	50.36
	ATOM	937	ND2	ASN	186	33.142	3.979	43.698	1.00	49.33
60	ATOM	938	C	ASN	186	30.140	4.201	47.144	1.00	47.63
	ATOM	939	O	ASN	186	29.211	4.005	47.946	1.00	49.72

	ATOM	940	GLY	187	31.125	5.059	47.609	1.00	46.81	
	ATOM	941	GLY	187	31.186	5.818	48.609	1.00	43.76	
	ATOM	942	C	GLY	187	32.326	6.797	48.480	1.00	41.12
	ATOM	943	O	GLY	187	32.640	7.519	49.421	1.00	42.63
5	ATOM	944	N	SER	188	32.951	6.800	47.306	1.00	38.37
	ATOM	945	CA	SER	188	34.065	7.691	47.030	1.00	36.56
	ATOM	946	CB	SER	188	34.804	7.249	45.768	1.00	37.67
	ATOM	947	OG	SER	188	35.648	6.153	46.049	1.00	42.41
	ATOM	948	C	SER	188	33.530	9.100	46.839	1.00	33.64
10	ATOM	949	O	SER	188	32.904	9.408	45.824	1.00	31.94
	ATOM	950	N	CYS	189	33.757	9.946	47.835	1.00	31.40
	ATOM	951	CA	CYS	189	33.320	11.329	47.768	1.00	29.46
	ATOM	952	C	CYS	189	34.555	12.190	47.586	1.00	27.90
	ATOM	953	O	CYS	189	35.591	11.948	48.202	1.00	28.50
15	ATOM	954	CB	CYS	189	32.598	11.731	49.051	1.00	29.56
	ATOM	955	SG	CYS	189	31.084	10.792	49.428	1.00	31.98
	ATOM	956	N	LEU	190	34.445	13.191	46.726	1.00	24.76
	ATOM	957	CA	LEU	190	35.563	14.079	46.472	1.00	22.68
	ATOM	958	CB	LEU	190	35.873	14.143	44.970	1.00	22.93
20	ATOM	959	CG	LEU	190	36.414	12.907	44.247	1.00	22.92
	ATOM	960	CD1	LEU	190	35.367	11.804	44.233	1.00	23.79
	ATOM	961	CD2	LEU	190	36.794	13.293	42.820	1.00	23.49
	ATOM	962	C	LEU	190	35.263	15.481	46.971	1.00	21.66
	ATOM	963	O	LEU	190	34.128	15.954	46.880	1.00	18.61
25	ATOM	964	N	GLN	191	36.285	16.133	47.508	1.00	20.57
	ATOM	965	CA	GLN	191	36.157	17.502	47.976	1.00	21.68
	ATOM	966	CB	GLN	191	37.052	17.737	49.193	1.00	22.65
	ATOM	967	CG	GLN	191	36.635	16.951	50.422	1.00	27.39
	ATOM	968	CD	GLN	191	37.541	17.213	51.609	1.00	28.93
30	ATOM	969	OE1	GLN	191	38.750	16.992	51.543	1.00	31.20
	ATOM	970	NE2	GLN	191	36.958	17.685	52.703	1.00	31.79
	ATOM	971	C	GLN	191	36.629	18.361	46.804	1.00	20.53
	ATOM	972	O	GLN	191	37.304	17.857	45.902	1.00	17.89
	ATOM	973	N	LEU	192	36.279	19.646	46.814	1.00	18.80
35	ATOM	974	CA	LEU	192	36.683	20.538	45.736	1.00	17.83
	ATOM	975	CB	LEU	192	36.197	21.964	46.004	1.00	17.41
	ATOM	976	CG	LEU	192	36.569	22.988	44.926	1.00	15.82
	ATOM	977	CD1	LEU	192	35.877	22.630	43.615	1.00	18.76
	ATOM	978	CD2	LEU	192	36.164	24.377	45.378	1.00	17.28
40	ATOM	979	C	LEU	192	38.199	20.540	45.568	1.00	19.20
	ATOM	980	O	LEU	192	38.713	20.284	44.483	1.00	19.52
	ATOM	981	N	GLU	193	38.914	20.837	46.644	1.00	20.67
	ATOM	982	CA	GLU	193	40.366	20.860	46.590	1.00	24.08
	ATOM	983	CB	GLU	193	40.894	22.208	47.099	1.00	25.06
45	ATOM	984	CG	GLU	193	40.261	23.400	46.387	1.00	30.04
	ATOM	985	CD	GLU	193	41.009	24.704	46.605	1.00	32.48
	ATOM	986	OE1	GLU	193	41.103	25.165	47.764	1.00	34.10
	ATOM	987	OE2	GLU	193	41.504	25.270	45.606	1.00	34.77
	ATOM	988	C	GLU	193	40.916	19.718	47.441	1.00	24.65
50	ATOM	989	O	GLU	193	40.514	19.542	48.590	1.00	24.48
	ATOM	990	N	PRO	194	41.831	18.914	46.877	1.00	24.86
	ATOM	991	CD	PRO	194	42.651	17.967	47.659	1.00	24.60
	ATOM	992	CA	PRO	194	42.361	19.042	45.516	1.00	23.62
	ATOM	993	CB	PRO	194	43.821	18.693	45.705	1.00	24.03
55	ATOM	994	CG	PRO	194	43.704	17.508	46.641	1.00	24.48
	ATOM	995	C	PRO	194	41.694	18.072	44.539	1.00	22.86
	ATOM	996	O	PRO	194	41.957	18.116	43.337	1.00	21.75
	ATOM	997	N	ASP	195	40.840	17.201	45.067	1.00	21.42
	ATOM	998	CA	ASP	195	40.176	16.177	44.267	1.00	22.19
60	ATOM	999	CB	ASP	195	39.183	15.395	45.130	1.00	21.92
	ATOM	1000	CG	ASP	195	39.844	14.746	46.330	1.00	27.22

	ATOM	1001	OD1	ASP	195	40.997	14.287	1.00	27.92
	ATOM	1002	OD2	ASP	195	39.208	14.687	1.00	30.18
	ATOM	1003	C	ASP	195	39.488	16.623	1.00	21.21
	ATOM	1004	O	ASP	195	39.953	16.301	1.00	23.11
5	ATOM	1005	N	LEU	196	38.383	17.351	1.00	19.29
	ATOM	1006	CA	LEU	196	37.662	17.793	1.00	18.52
	ATOM	1007	CB	LEU	196	36.360	18.487	1.00	16.88
	ATOM	1008	CG	LEU	196	35.342	17.535	1.00	19.05
	ATOM	1009	CD1	LEU	196	34.224	18.325	1.00	19.51
10	ATOM	1010	CD2	LEU	196	34.793	16.583	1.00	19.00
	ATOM	1011	C	LEU	196	38.519	18.708	1.00	17.36
	ATOM	1012	O	LEU	196	38.435	18.675	1.00	16.52
	ATOM	1013	N	THR	197	39.346	19.517	1.00	17.60
	ATOM	1014	CA	THR	197	40.231	20.440	1.00	17.78
15	ATOM	1015	CB	THR	197	41.020	21.316	1.00	18.34
	ATOM	1016	OG1	THR	197	40.137	22.295	1.00	22.95
	ATOM	1017	CG2	THR	197	42.172	22.032	1.00	22.61
	ATOM	1018	C	THR	197	41.205	19.679	1.00	18.14
	ATOM	1019	O	THR	197	41.460	20.089	1.00	15.11
20	ATOM	1020	N	ASN	198	41.747	18.575	1.00	18.47
	ATOM	1021	CA	ASN	198	42.679	17.760	1.00	19.73
	ATOM	1022	CB	ASN	198	43.298	16.648	1.00	24.67
	ATOM	1023	CG	ASN	198	44.208	17.185	1.00	30.01
	ATOM	1024	OD1	ASN	198	44.853	18.223	1.00	32.67
25	ATOM	1025	ND2	ASN	198	44.282	16.460	1.00	33.72
	ATOM	1026	C	ASN	198	41.968	17.128	1.00	16.49
	ATOM	1027	O	ASN	198	42.514	17.091	1.00	17.40
	ATOM	1028	N	VAL	199	40.754	16.626	1.00	15.82
	ATOM	1029	CA	VAL	199	39.988	16.013	1.00	14.87
30	ATOM	1030	CB	VAL	199	38.605	15.504	1.00	15.42
	ATOM	1031	CG1	VAL	199	37.766	15.069	1.00	15.86
	ATOM	1032	CG2	VAL	199	38.776	14.317	1.00	14.36
	ATOM	1033	C	VAL	199	39.771	17.013	1.00	14.32
	ATOM	1034	O	VAL	199	39.965	16.688	1.00	11.80
35	ATOM	1035	N	MET	200	39.366	18.231	1.00	14.83
	ATOM	1036	CA	MET	200	39.123	19.259	1.00	14.38
	ATOM	1037	CB	MET	200	38.524	20.517	1.00	12.52
	ATOM	1038	CG	MET	200	37.128	20.328	1.00	12.28
	ATOM	1039	SD	MET	200	35.935	19.690	1.00	14.88
40	ATOM	1040	CE	MET	200	35.797	21.097	1.00	12.30
	ATOM	1041	C	MET	200	40.405	19.632	1.00	13.50
	ATOM	1042	O	MET	200	40.375	19.989	1.00	13.68
	ATOM	1043	N	ALA	201	41.533	19.535	1.00	12.51
	ATOM	1044	CA	ALA	201	42.814	19.891	1.00	14.22
45	ATOM	1045	CB	ALA	201	43.762	20.372	1.00	12.68
	ATOM	1046	C	ALA	201	43.501	18.794	1.00	14.13
	ATOM	1047	O	ALA	201	44.239	19.092	1.00	13.71
	ATOM	1048	N	THR	202	43.246	17.534	1.00	13.05
	ATOM	1049	CA	THR	202	43.932	16.442	1.00	14.28
50	ATOM	1050	CB	THR	202	44.677	15.579	1.00	13.91
	ATOM	1051	OG1	THR	202	43.734	15.052	1.00	16.38
	ATOM	1052	CG2	THR	202	45.702	16.412	1.00	14.07
	ATOM	1053	C	THR	202	43.105	15.512	1.00	14.85
	ATOM	1054	O	THR	202	43.631	14.920	1.00	13.44
55	ATOM	1055	N	SER	203	41.824	15.356	1.00	14.42
	ATOM	1056	CA	SER	203	40.993	14.482	1.00	15.37
	ATOM	1057	CB	SER	203	39.620	14.296	1.00	15.43
	ATOM	1058	OG	SER	203	38.771	13.571	1.00	16.22
	ATOM	1059	C	SER	203	40.817	15.043	1.00	17.26
60	ATOM	1060	O	SER	203	40.718	16.258	1.00	15.56
	ATOM	1061	N	ARG	204	40.788	14.143	1.00	17.39

	ATOM	1062	ARG	204	40.598	14.503	29.000	1.00	19.50
	ATOM	1063	CB ARG	204	41.869	14.206	28.224	1.00	21.26
	ATOM	1064	CG ARG	204	42.743	15.424	27.899	1.00	24.82
	ATOM	1065	CD ARG	204	42.745	16.460	29.009	1.00	25.90
5	ATOM	1066	NE ARG	204	43.950	17.284	29.001	1.00	25.48
	ATOM	1067	CZ ARG	204	44.225	18.207	29.921	1.00	26.92
	ATOM	1068	NH1 ARG	204	45.345	18.908	29.852	1.00	26.07
	ATOM	1069	NH2 ARG	204	43.372	18.437	30.908	1.00	28.93
	ATOM	1070	C ARG	204	39.425	13.679	28.497	1.00	19.23
10	ATOM	1071	O ARG	204	39.299	13.448	27.292	1.00	18.09
	ATOM	1072	N LYS	205	38.575	13.231	29.416	1.00	19.44
	ATOM	1073	CA LYS	205	37.397	12.444	29.069	1.00	20.20
	ATOM	1074	CB LYS	205	37.340	11.175	29.922	1.00	20.93
	ATOM	1075	CG LYS	205	38.602	10.323	29.803	1.00	26.30
15	ATOM	1076	CD LYS	205	38.426	8.924	30.380	1.00	29.11
	ATOM	1077	CE LYS	205	37.499	8.077	29.518	1.00	32.25
	ATOM	1078	NZ LYS	205	37.474	6.652	29.959	1.00	35.02
	ATOM	1079	C LYS	205	36.160	13.304	29.303	1.00	18.71
	ATOM	1080	O LYS	205	35.854	13.680	30.440	1.00	17.01
20	ATOM	1081	N TYR	206	35.457	13.608	28.215	1.00	16.75
	ATOM	1082	CA TYR	206	34.263	14.453	28.241	1.00	16.98
	ATOM	1083	CB TYR	206	33.550	14.383	26.884	1.00	16.42
	ATOM	1084	CG TYR	206	32.574	15.513	26.617	1.00	16.97
	ATOM	1085	CD1 TYR	206	32.941	16.599	25.821	1.00	15.01
25	ATOM	1086	CE1 TYR	206	32.044	17.621	25.539	1.00	16.36
	ATOM	1087	CD2 TYR	206	31.275	15.485	27.135	1.00	15.21
	ATOM	1088	CE2 TYR	206	30.370	16.509	26.862	1.00	15.72
	ATOM	1089	CZ TYR	206	30.761	17.573	26.061	1.00	17.54
	ATOM	1090	OH TYR	206	29.874	18.590	25.772	1.00	19.58
30	ATOM	1091	C TYR	206	33.273	14.106	29.350	1.00	16.80
	ATOM	1092	O TYR	206	32.772	14.990	30.039	1.00	16.60
	ATOM	1093	N GLU	207	32.980	12.819	29.514	1.00	16.66
	ATOM	1094	CA GLU	207	32.029	12.387	30.533	1.00	15.78
	ATOM	1095	CB GLU	207	31.584	10.941	30.268	1.00	16.34
35	ATOM	1096	CG GLU	207	30.808	10.730	28.962	1.00	17.93
	ATOM	1097	CD GLU	207	29.479	11.488	28.917	1.00	21.81
	ATOM	1098	OE1 GLU	207	28.742	11.475	29.925	1.00	20.91
	ATOM	1099	OE2 GLU	207	29.166	12.089	27.863	1.00	22.78
	ATOM	1100	C GLU	207	32.565	12.511	31.960	1.00	14.53
40	ATOM	1101	O GLU	207	31.798	12.773	32.886	1.00	15.02
	ATOM	1102	N ASP	208	33.867	12.312	32.147	1.00	13.86
	ATOM	1103	CA ASP	208	34.445	12.422	33.489	1.00	14.82
	ATOM	1104	CB ASP	208	35.870	11.854	33.531	1.00	16.21
	ATOM	1105	CG ASP	208	35.912	10.338	33.365	1.00	20.87
45	ATOM	1106	OD1 ASP	208	34.883	9.674	33.606	1.00	23.51
	ATOM	1107	OD2 ASP	208	36.984	9.805	33.011	1.00	22.35
	ATOM	1108	C ASP	208	34.460	13.890	33.920	1.00	13.51
	ATOM	1109	O ASP	208	34.160	14.216	35.068	1.00	10.65
	ATOM	1110	N LEU	209	34.808	14.771	32.988	1.00	12.89
50	ATOM	1111	CA LEU	209	34.838	16.200	33.269	1.00	12.10
	ATOM	1112	CB LEU	209	35.407	16.951	32.063	1.00	11.37
	ATOM	1113	CG LEU	209	36.907	16.746	31.811	1.00	10.29
	ATOM	1114	CD1 LEU	209	37.298	17.353	30.474	1.00	9.40
	ATOM	1115	CD2 LEU	209	37.705	17.380	32.950	1.00	9.04
55	ATOM	1116	C LEU	209	33.421	16.684	33.575	1.00	13.60
	ATOM	1117	O LEU	209	33.210	17.517	34.460	1.00	12.24
	ATOM	1118	N LEU	210	32.452	16.145	32.843	1.00	12.89
	ATOM	1119	CA LEU	210	31.058	16.516	33.033	1.00	13.89
	ATOM	1120	CB LEU	210	30.193	15.862	31.951	1.00	16.04
60	ATOM	1121	CG LEU	210	28.700	16.200	31.985	1.00	17.33
	ATOM	1122	CD1 LEU	210	28.515	17.711	31.938	1.00	18.83

	ATOM	1121	CD2	LEU	210	28.003	15.543	34.803	1.00	18.20
	ATOM	1124	C	LEU	210	30.561	16.100	34.415	1.00	14.94
	ATOM	1125	O	LEU	210	29.848	16.849	35.089	1.00	13.44
	ATOM	1126	N	TRP	211	30.938	14.895	34.829	1.00	14.27
5	ATOM	1127	CA	TRP	211	30.543	14.377	36.133	1.00	14.75
	ATOM	1128	CB	TRP	211	31.191	13.003	36.380	1.00	17.05
	ATOM	1129	CG	TRP	211	30.897	12.452	37.745	1.00	19.27
	ATOM	1130	CD2	TRP	211	31.702	12.600	38.925	1.00	19.31
	ATOM	1131	CE2	TRP	211	30.996	12.007	39.991	1.00	20.70
10	ATOM	1132	CE3	TRP	211	32.950	13.183	39.183	1.00	20.90
	ATOM	1133	CD1	TRP	211	29.772	11.788	38.133	1.00	21.04
	ATOM	1134	NE1	TRP	211	29.822	11.517	39.482	1.00	21.92
	ATOM	1135	CZ2	TRP	211	31.496	11.977	41.301	1.00	23.12
	ATOM	1136	CZ3	TRP	211	33.448	13.154	40.485	1.00	21.37
15	ATOM	1137	CH2	TRP	211	32.720	12.556	41.526	1.00	21.61
	ATOM	1138	C	TRP	211	30.977	15.350	37.236	1.00	13.96
	ATOM	1139	O	TRP	211	30.183	15.722	38.096	1.00	11.98
	ATOM	1140	N	ALA	212	32.244	15.753	37.200	1.00	13.24
	ATOM	1141	CA	ALA	212	32.790	16.673	38.195	1.00	13.44
20	ATOM	1142	CB	ALA	212	34.313	16.743	38.057	1.00	12.36
	ATOM	1143	C	ALA	212	32.194	18.076	38.081	1.00	13.04
	ATOM	1144	O	ALA	212	31.875	18.707	39.091	1.00	13.12
	ATOM	1145	N	TRP	213	32.050	18.560	36.851	1.00	13.51
	ATOM	1146	CA	TRP	213	31.503	19.896	36.601	1.00	13.80
25	ATOM	1147	CB	TRP	213	31.554	20.212	35.099	1.00	13.04
	ATOM	1148	CG	TRP	213	31.128	21.614	34.756	1.00	12.05
	ATOM	1149	CD2	TRP	213	29.800	22.062	34.454	1.00	12.15
	ATOM	1150	CE2	TRP	213	29.870	23.458	34.233	1.00	13.44
	ATOM	1151	CE3	TRP	213	28.556	21.421	34.352	1.00	12.18
30	ATOM	1152	CD1	TRP	213	31.925	22.723	34.704	1.00	14.22
	ATOM	1153	NE1	TRP	213	31.177	23.834	34.390	1.00	12.82
	ATOM	1154	CZ2	TRP	213	28.741	24.227	33.915	1.00	12.19
	ATOM	1155	CZ3	TRP	213	27.434	22.184	34.035	1.00	12.97
	ATOM	1156	CH2	TRP	213	27.536	23.574	33.821	1.00	12.27
35	ATOM	1157	C	TRP	213	30.058	20.014	37.094	1.00	13.65
	ATOM	1158	O	TRP	213	29.711	20.944	37.824	1.00	12.41
	ATOM	1159	N	GLU	214	29.223	19.065	36.678	1.00	14.41
	ATOM	1160	CA	GLU	214	27.815	19.043	37.055	1.00	15.02
	ATOM	1161	CB	GLU	214	27.067	18.017	36.200	1.00	16.55
40	ATOM	1162	CG	GLU	214	25.569	17.945	36.459	1.00	19.62
	ATOM	1163	CD	GLU	214	24.851	19.220	36.077	1.00	21.05
	ATOM	1164	OE1	GLU	214	25.063	19.698	34.944	1.00	24.80
	ATOM	1165	OE2	GLU	214	24.068	19.743	36.901	1.00	24.78
	ATOM	1166	C	GLU	214	27.636	18.704	38.533	1.00	15.51
45	ATOM	1167	O	GLU	214	26.829	19.320	39.232	1.00	14.95
	ATOM	1168	N	GLY	215	28.398	17.722	39.002	1.00	15.44
	ATOM	1169	CA	GLY	215	28.302	17.307	40.389	1.00	15.35
	ATOM	1170	C	GLY	215	28.587	18.422	41.373	1.00	15.21
	ATOM	1171	O	GLY	215	27.857	18.604	42.345	1.00	15.46
50	ATOM	1172	N	TRP	216	29.650	19.176	41.121	1.00	15.46
	ATOM	1173	CA	TRP	216	30.009	20.267	42.011	1.00	14.95
	ATOM	1174	CB	TRP	216	31.285	20.965	41.528	1.00	14.52
	ATOM	1175	CG	TRP	216	31.676	22.122	42.404	1.00	13.26
	ATOM	1176	CD2	TRP	216	31.967	22.071	43.807	1.00	14.02
55	ATOM	1177	CE2	TRP	216	32.207	23.399	44.233	1.00	14.00
	ATOM	1178	CE3	TRP	216	32.046	21.033	44.747	1.00	13.78
	ATOM	1179	CD1	TRP	216	31.755	23.437	42.045	1.00	11.53
	ATOM	1180	NE1	TRP	216	32.073	24.210	43.138	1.00	12.94
	ATOM	1181	CZ2	TRP	216	32.519	23.717	45.558	1.00	13.90
60	ATOM	1182	CZ3	TRP	216	32.357	21.349	46.068	1.00	15.08
	ATOM	1183	CH2	TRP	216	32.589	22.684	46.459	1.00	16.36

	ATOM	1184	TRP	216	28.874	21.276	42.100	1.00	14.83
	ATOM	1185	TRP	216	28.560	21.768	43.193	1.00	16.29
	ATOM	1186	N ARG	217	28.253	21.575	40.978	1.00	14.63
5	ATOM	1187	CA ARG	217	27.159	22.528	40.959	1.00	14.60
	ATOM	1188	CB ARG	217	26.903	22.978	39.517	1.00	12.12
	ATOM	1189	CG ARG	217	28.042	23.875	39.021	1.00	13.34
	ATOM	1190	CD ARG	217	28.071	24.122	37.520	1.00	12.75
	ATOM	1191	NE ARG	217	29.163	25.043	37.206	1.00	12.99
	ATOM	1192	CZ ARG	217	30.458	24.750	37.326	1.00	11.14
10	ATOM	1193	NH1 ARG	217	31.373	25.658	37.033	1.00	12.84
	ATOM	1194	NH2 ARG	217	30.844	23.544	37.714	1.00	12.36
	ATOM	1195	C ARG	217	25.905	21.958	41.622	1.00	15.54
	ATOM	1196	O ARG	217	25.174	22.680	42.293	1.00	15.86
	ATOM	1197	N ASP	218	25.672	20.657	41.459	1.00	16.94
15	ATOM	1198	CA ASP	218	24.515	20.012	42.077	1.00	17.27
	ATOM	1199	CB ASP	218	24.403	18.543	41.652	1.00	16.71
	ATOM	1200	CG ASP	218	24.061	18.372	40.185	1.00	19.76
	ATOM	1201	OD1 ASP	218	23.644	19.355	39.531	1.00	21.08
	ATOM	1202	OD2 ASP	218	24.194	17.233	39.691	1.00	19.39
20	ATOM	1203	C ASP	218	24.624	20.048	43.601	1.00	16.65
	ATOM	1204	O ASP	218	23.633	20.251	44.300	1.00	18.01
	ATOM	1205	N LYS	219	25.836	19.846	44.108	1.00	17.48
	ATOM	1206	CA LYS	219	26.068	19.814	45.550	1.00	18.13
	ATOM	1207	CB LYS	219	27.184	18.817	45.867	1.00	18.30
25	ATOM	1208	CG LYS	219	26.905	17.403	45.361	1.00	20.52
	ATOM	1209	CD LYS	219	25.600	16.846	45.927	1.00	21.52
	ATOM	1210	CE LYS	219	25.657	16.721	47.445	1.00	23.83
	ATOM	1211	NZ LYS	219	26.779	15.849	47.890	1.00	24.81
	ATOM	1212	C LYS	219	26.376	21.151	46.221	1.00	18.56
30	ATOM	1213	O LYS	219	25.864	21.430	47.302	1.00	19.73
	ATOM	1214	N ALA	220	27.221	21.972	45.607	1.00	18.09
	ATOM	1215	CA ALA	220	27.552	23.264	46.207	1.00	17.10
	ATOM	1216	CB ALA	220	28.988	23.656	45.867	1.00	16.84
	ATOM	1217	C ALA	220	26.585	24.350	45.739	1.00	15.48
35	ATOM	1218	O ALA	220	25.976	25.038	46.553	1.00	16.35
	ATOM	1219	N GLY	221	26.444	24.486	44.425	1.00	14.00
	ATOM	1220	CA GLY	221	25.561	25.491	43.868	1.00	12.74
	ATOM	1221	C GLY	221	24.118	25.433	44.344	1.00	15.22
	ATOM	1222	O GLY	221	23.598	26.412	44.886	1.00	15.26
40	ATOM	1223	N ARG	222	23.461	24.295	44.147	1.00	14.02
	ATOM	1224	CA ARG	222	22.068	24.157	44.556	1.00	15.84
	ATOM	1225	CB ARG	222	21.532	22.774	44.160	1.00	16.90
	ATOM	1226	CG ARG	222	21.412	22.572	42.655	1.00	16.24
	ATOM	1227	CD ARG	222	20.870	21.182	42.318	1.00	20.12
45	ATOM	1228	NE ARG	222	20.609	21.044	40.888	1.00	23.09
	ATOM	1229	CZ ARG	222	20.399	19.884	40.269	1.00	25.88
	ATOM	1230	NH1 ARG	222	20.417	18.746	40.952	1.00	24.84
	ATOM	1231	NH2 ARG	222	20.182	19.860	38.960	1.00	26.85
	ATOM	1232	C ARG	222	21.846	24.385	46.050	1.00	14.53
50	ATOM	1233	O ARG	222	20.813	24.918	46.452	1.00	15.21
	ATOM	1234	N ALA	223	22.821	23.991	46.861	1.00	13.97
	ATOM	1235	CA ALA	223	22.729	24.133	48.310	1.00	14.89
	ATOM	1236	CB ALA	223	23.818	23.284	48.980	1.00	14.97
	ATOM	1237	C ALA	223	22.822	25.581	48.794	1.00	15.26
55	ATOM	1238	O ALA	223	22.443	25.891	49.923	1.00	15.20
	ATOM	1239	N ILE	224	23.328	26.470	47.949	1.00	14.59
	ATOM	1240	CA ILE	224	23.444	27.871	48.338	1.00	13.97
	ATOM	1241	CB ILE	224	24.651	28.545	47.629	1.00	13.29
	ATOM	1242	CG2 ILE	224	24.713	30.027	47.970	1.00	11.18
60	ATOM	1243	CG1 ILE	224	25.950	27.852	48.051	1.00	15.89
	ATOM	1244	CD1 ILE	224	26.228	27.904	49.550	1.00	14.70

	ATOM	1246	C	ILE	224	22.163	28.644	48.007	1.00	13.79
	ATOM	1246	O	ILE	224	21.842	29.638	48.655	1.00	14.26
	ATOM	1247	N	LEU	225	21.422	28.167	47.014	1.00	13.03
	ATOM	1248	CA	LEU	225	20.203	28.834	46.578	1.00	13.73
5	ATOM	1249	CB	LEU	225	19.521	28.011	45.481	1.00	13.73
	ATOM	1250	CG	LEU	225	18.230	28.616	44.922	1.00	15.14
	ATOM	1251	CD1	LEU	225	18.513	29.995	44.338	1.00	13.02
	ATOM	1252	CD2	LEU	225	17.646	27.684	43.865	1.00	15.05
	ATOM	1253	C	LEU	225	19.188	29.170	47.673	1.00	15.99
10	ATOM	1254	O	LEU	225	18.557	30.228	47.626	1.00	16.45
	ATOM	1255	N	GLN	226	19.022	28.296	48.661	1.00	17.25
	ATOM	1256	CA	GLN	226	18.053	28.578	49.717	1.00	17.93
	ATOM	1257	CB	GLN	226	17.860	27.365	50.629	1.00	18.12
	ATOM	1258	CG	GLN	226	19.093	26.934	51.392	1.00	21.07
15	ATOM	1259	CD	GLN	226	18.752	26.031	52.566	1.00	25.37
	ATOM	1260	OE1	GLN	226	19.475	25.083	52.869	1.00	28.28
	ATOM	1261	NE2	GLN	226	17.651	26.334	53.242	1.00	25.39
	ATOM	1262	C	GLN	226	18.422	29.787	50.570	1.00	18.27
	ATOM	1263	O	GLN	226	17.552	30.381	51.207	1.00	18.35
20	ATOM	1264	N	PHE	227	19.702	30.158	50.579	1.00	17.08
	ATOM	1265	CA	PHE	227	20.156	31.298	51.376	1.00	17.03
	ATOM	1266	CB	PHE	227	21.531	31.015	52.001	1.00	17.75
	ATOM	1267	CG	PHE	227	21.594	29.756	52.820	1.00	19.66
	ATOM	1268	CD1	PHE	227	22.214	28.617	52.315	1.00	18.54
25	ATOM	1269	CD2	PHE	227	21.058	29.715	54.102	1.00	19.80
	ATOM	1270	CE1	PHE	227	22.303	27.457	53.077	1.00	20.33
	ATOM	1271	CE2	PHE	227	21.138	28.560	54.874	1.00	20.11
	ATOM	1272	CZ	PHE	227	21.763	27.428	54.362	1.00	21.23
	ATOM	1273	C	PHE	227	20.277	32.631	50.635	1.00	15.96
30	ATOM	1274	O	PHE	227	20.123	33.686	51.243	1.00	14.83
	ATOM	1275	N	TYR	228	20.552	32.588	49.332	1.00	14.81
	ATOM	1276	CA	TYR	228	20.786	33.813	48.566	1.00	13.93
	ATOM	1277	CB	TYR	228	21.163	33.484	47.114	1.00	12.40
	ATOM	1278	CG	TYR	228	22.287	34.363	46.617	1.00	11.13
35	ATOM	1279	CD1	TYR	228	23.561	34.271	47.181	1.00	10.09
	ATOM	1280	CE1	TYR	228	24.596	35.119	46.780	1.00	9.24
	ATOM	1281	CD2	TYR	228	22.073	35.327	45.628	1.00	12.00
	ATOM	1282	CE2	TYR	228	23.105	36.184	45.218	1.00	9.28
	ATOM	1283	CZ	TYR	228	24.361	36.073	45.803	1.00	10.33
40	ATOM	1284	OH	TYR	228	25.380	36.927	45.447	1.00	9.24
	ATOM	1285	C	TYR	228	19.750	34.930	48.561	1.00	14.20
	ATOM	1286	O	TYR	228	20.095	36.092	48.787	1.00	13.92
	ATOM	1287	N	PRO	229	18.476	34.615	48.287	1.00	15.32
	ATOM	1288	CD	PRO	229	17.850	33.355	47.841	1.00	14.61
45	ATOM	1289	CA	PRO	229	17.504	35.713	48.288	1.00	14.32
	ATOM	1290	CB	PRO	229	16.183	35.001	48.005	1.00	14.50
	ATOM	1291	CG	PRO	229	16.612	33.854	47.114	1.00	14.48
	ATOM	1292	C	PRO	229	17.487	36.503	49.603	1.00	15.12
	ATOM	1293	O	PRO	229	17.378	37.731	49.592	1.00	14.15
50	ATOM	1294	N	LYS	230	17.612	35.803	50.730	1.00	15.42
	ATOM	1295	CA	LYS	230	17.598	36.463	52.038	1.00	15.89
	ATOM	1296	CB	LYS	230	17.459	35.441	53.166	1.00	16.82
	ATOM	1297	CG	LYS	230	16.964	36.061	54.462	1.00	19.46
	ATOM	1298	CD	LYS	230	15.624	36.737	54.200	1.00	24.16
55	ATOM	1299	CE	LYS	230	14.959	37.224	55.463	1.00	28.11
	ATOM	1300	NZ	LYS	230	13.630	37.824	55.153	1.00	26.83
	ATOM	1301	C	LYS	230	18.871	37.272	52.240	1.00	14.81
	ATOM	1302	O	LYS	230	18.852	38.364	52.811	1.00	12.92
	ATOM	1303	N	TYR	231	19.979	36.714	51.774	1.00	14.42
60	ATOM	1304	CA	TYR	231	21.270	37.375	51.848	1.00	11.87
	ATOM	1305	CB	TYR	231	22.330	36.466	51.223	1.00	11.76

	ATOM	1306	TYR	231	23.525	37.197	50.000	1.00	10.89
	ATOM	1307	CD1 TYR	231	24.499	37.736	51.500	1.00	9.98
	ATOM	1308	CE1 TYR	231	25.612	38.397	50.976	1.00	12.44
	ATOM	1309	CD2 TYR	231	23.683	37.341	49.279	1.00	11.71
5	ATOM	1310	CE2 TYR	231	24.788	38.004	48.745	1.00	12.56
	ATOM	1311	CZ TYR	231	25.750	38.523	49.597	1.00	11.83
	ATOM	1312	OH TYR	231	26.870	39.120	49.071	1.00	11.18
	ATOM	1313	C TYR	231	21.191	38.699	51.080	1.00	11.12
	ATOM	1314	O TYR	231	21.616	39.741	51.575	1.00	12.14
10	ATOM	1315	N VAL	232	20.654	38.646	49.864	1.00	11.62
	ATOM	1316	CA VAL	232	20.516	39.833	49.019	1.00	10.85
	ATOM	1317	CB VAL	232	19.900	39.455	47.648	1.00	11.31
	ATOM	1318	CG1 VAL	232	19.439	40.697	46.900	1.00	10.40
	ATOM	1319	CG2 VAL	232	20.934	38.699	46.821	1.00	11.64
15	ATOM	1320	C VAL	232	19.658	40.904	49.698	1.00	12.40
	ATOM	1321	O VAL	232	19.992	42.096	49.682	1.00	11.44
	ATOM	1322	N GLU	233	18.557	40.473	50.303	1.00	12.62
	ATOM	1323	CA GLU	233	17.661	41.389	50.995	1.00	14.05
	ATOM	1324	CB GLU	233	16.437	40.617	51.506	1.00	17.42
20	ATOM	1325	CG GLU	233	15.557	41.381	52.487	1.00	22.94
	ATOM	1326	CD GLU	233	14.322	40.593	52.907	1.00	27.83
	ATOM	1327	OE1 GLU	233	14.416	39.355	53.069	1.00	29.39
	ATOM	1328	OE2 GLU	233	13.256	41.216	53.089	1.00	32.62
	ATOM	1329	C GLU	233	18.367	42.098	52.155	1.00	12.54
25	ATOM	1330	O GLU	233	18.313	43.320	52.273	1.00	13.58
	ATOM	1331	N LEU	234	19.043	41.328	52.999	1.00	12.59
	ATOM	1332	CA LEU	234	19.738	41.885	54.153	1.00	12.98
	ATOM	1333	CB LEU	234	20.149	40.758	55.106	1.00	13.67
	ATOM	1334	CG LEU	234	18.968	40.015	55.738	1.00	16.89
30	ATOM	1335	CD1 LEU	234	19.464	38.803	56.512	1.00	16.48
	ATOM	1336	CD2 LEU	234	18.200	40.964	56.650	1.00	16.76
	ATOM	1337	C LEU	234	20.952	42.750	53.820	1.00	12.60
	ATOM	1338	O LEU	234	21.145	43.801	54.430	1.00	11.00
	ATOM	1339	N ILE	235	21.774	42.328	52.862	1.00	10.69
35	ATOM	1340	CA ILE	235	22.945	43.130	52.522	1.00	10.15
	ATOM	1341	CB ILE	235	23.963	42.341	51.654	1.00	11.30
	ATOM	1342	CG2 ILE	235	23.383	42.074	50.252	1.00	8.24
	ATOM	1343	CG1 ILE	235	25.283	43.124	51.589	1.00	9.63
	ATOM	1344	CD1 ILE	235	26.426	42.355	50.948	1.00	9.83
40	ATOM	1345	C ILE	235	22.525	44.422	51.820	1.00	9.51
	ATOM	1346	O ILE	235	23.177	45.456	51.970	1.00	9.55
	ATOM	1347	N ASN	236	21.430	44.372	51.066	1.00	9.09
	ATOM	1348	CA ASN	236	20.925	45.570	50.398	1.00	10.19
	ATOM	1349	CB ASN	236	19.825	45.225	49.385	1.00	10.23
45	ATOM	1350	CG ASN	236	20.371	44.929	48.001	1.00	11.26
	ATOM	1351	OD1 ASN	236	21.501	45.293	47.677	1.00	10.18
	ATOM	1352	ND2 ASN	236	19.557	44.290	47.167	1.00	12.22
	ATOM	1353	C ASN	236	20.356	46.525	51.453	1.00	11.01
	ATOM	1354	O ASN	236	20.569	47.738	51.387	1.00	10.90
50	ATOM	1355	N GLN	237	19.630	45.969	52.421	1.00	12.58
	ATOM	1356	CA GLN	237	19.038	46.769	53.489	1.00	12.11
	ATOM	1357	CB GLN	237	18.264	45.876	54.460	1.00	14.23
	ATOM	1358	CG GLN	237	17.428	46.638	55.483	1.00	14.79
	ATOM	1359	CD GLN	237	16.781	45.714	56.502	1.00	18.93
55	ATOM	1360	OE1 GLN	237	16.567	44.532	56.233	1.00	20.61
	ATOM	1361	NE2 GLN	237	16.455	46.254	57.672	1.00	17.63
	ATOM	1362	C GLN	237	20.149	47.498	54.239	1.00	12.36
	ATOM	1363	O GLN	237	20.038	48.687	54.537	1.00	12.83
	ATOM	1364	N ALA	238	21.218	46.771	54.549	1.00	10.55
60	ATOM	1365	CA ALA	238	22.353	47.361	55.245	1.00	10.94
	ATOM	1366	CB ALA	238	23.431	46.316	55.473	1.00	7.92

	ATOM	1365	C	ALA	238	22.909	48.509	54.808	1.00	11.58
	ATOM	1368	O	ALA	238	23.205	49.578	54.931	1.00	12.66
	ATOM	1369	N	ALA	239	23.045	48.280	53.104	1.00	11.03
	ATOM	1370	CA	ALA	239	23.569	49.302	52.207	1.00	12.87
5	ATOM	1371	CB	ALA	239	23.647	48.762	50.779	1.00	11.95
	ATOM	1372	C	ALA	239	22.719	50.570	52.245	1.00	13.46
	ATOM	1373	O	ALA	239	23.257	51.677	52.337	1.00	12.98
	ATOM	1374	N	ARG	240	21.396	50.408	52.180	1.00	13.34
	ATOM	1375	CA	ARG	240	20.491	51.556	52.204	1.00	13.67
10	ATOM	1376	CB	ARG	240	19.037	51.122	51.959	1.00	12.51
	ATOM	1377	CG	ARG	240	18.763	50.570	50.559	1.00	14.85
	ATOM	1378	CD	ARG	240	17.266	50.496	50.262	1.00	13.15
	ATOM	1379	NE	ARG	240	16.531	49.731	51.269	1.00	15.23
	ATOM	1380	CZ	ARG	240	16.450	48.405	51.307	1.00	17.70
15	ATOM	1381	NH1	ARG	240	17.060	47.665	50.380	1.00	15.68
	ATOM	1382	NH2	ARG	240	15.759	47.814	52.278	1.00	16.05
	ATOM	1383	C	ARG	240	20.583	52.299	53.533	1.00	13.93
	ATOM	1384	O	ARG	240	20.502	53.526	53.571	1.00	13.67
	ATOM	1385	N	LEU	241	20.753	51.553	54.619	1.00	14.68
20	ATOM	1386	CA	LEU	241	20.853	52.155	55.941	1.00	15.52
	ATOM	1387	CB	LEU	241	20.731	51.075	57.025	1.00	14.97
	ATOM	1388	CG	LEU	241	19.324	50.472	57.150	1.00	16.48
	ATOM	1389	CD1	LEU	241	19.332	49.281	58.102	1.00	14.35
	ATOM	1390	CD2	LEU	241	18.361	51.552	57.644	1.00	17.43
25	ATOM	1391	C	LEU	241	22.159	52.927	56.096	1.00	15.83
	ATOM	1392	O	LEU	241	22.331	53.695	57.047	1.00	15.43
	ATOM	1393	N	ASN	242	23.074	52.729	55.152	1.00	14.16
	ATOM	1394	CA	ASN	242	24.350	53.426	55.185	1.00	13.59
	ATOM	1395	CB	ASN	242	25.500	52.423	55.067	1.00	12.71
30	ATOM	1396	CG	ASN	242	25.778	51.711	56.384	1.00	15.20
	ATOM	1397	OD1	ASN	242	26.069	52.354	57.395	1.00	14.44
	ATOM	1398	ND2	ASN	242	25.678	50.385	56.382	1.00	13.74
	ATOM	1399	C	ASN	242	24.463	54.516	54.120	1.00	13.25
	ATOM	1400	O	ASN	242	25.540	55.063	53.894	1.00	13.69
35	ATOM	1401	N	GLY	243	23.346	54.820	53.462	1.00	13.09
	ATOM	1402	CA	GLY	243	23.341	55.876	52.462	1.00	14.67
	ATOM	1403	C	GLY	243	23.442	55.495	50.997	1.00	12.85
	ATOM	1404	O	GLY	243	23.392	56.375	50.137	1.00	13.08
	ATOM	1405	N	TYR	244	23.595	54.207	50.701	1.00	12.73
40	ATOM	1406	CA	TYR	244	23.697	53.752	49.312	1.00	12.34
	ATOM	1407	CB	TYR	244	24.715	52.609	49.200	1.00	10.80
	ATOM	1408	CG	TYR	244	26.115	52.990	49.633	1.00	12.14
	ATOM	1409	CD1	TYR	244	26.589	52.660	50.901	1.00	11.88
	ATOM	1410	CE1	TYR	244	27.870	53.038	51.316	1.00	10.81
45	ATOM	1411	CD2	TYR	244	26.956	53.711	48.783	1.00	9.56
	ATOM	1412	CE2	TYR	244	28.237	54.096	49.189	1.00	10.67
	ATOM	1413	CZ	TYR	244	28.684	53.757	50.455	1.00	10.80
	ATOM	1414	OH	TYR	244	29.937	54.150	50.864	1.00	13.51
	ATOM	1415	C	TYR	244	22.337	53.281	48.802	1.00	12.43
50	ATOM	1416	O	TYR	244	21.401	53.121	49.585	1.00	15.41
	ATOM	1417	N	VAL	245	22.215	53.064	47.493	1.00	13.45
	ATOM	1418	CA	VAL	245	20.945	52.596	46.937	1.00	13.11
	ATOM	1419	CB	VAL	245	20.752	53.071	45.476	1.00	15.33
	ATOM	1420	CG1	VAL	245	20.670	54.595	45.446	1.00	17.06
55	ATOM	1421	CG2	VAL	245	21.894	52.589	44.604	1.00	15.86
	ATOM	1422	C	VAL	245	20.807	51.073	47.015	1.00	11.99
	ATOM	1423	O	VAL	245	19.697	50.549	47.045	1.00	13.05
	ATOM	1424	N	ASP	246	21.936	50.368	47.047	1.00	9.74
	ATOM	1425	CA	ASP	246	21.946	48.907	47.163	1.00	10.63
60	ATOM	1426	CB	ASP	246	21.378	48.233	45.896	1.00	9.06
	ATOM	1427	CG	ASP	246	22.202	48.520	44.644	1.00	11.98

	ATOM	1428	ASP	246	23.385	48.125	44.5	1.00	10.98
	ATOM	1429	ASP	246	21.658	49.140	43.708	1.00	10.66
	ATOM	1430	C	246	23.373	48.424	47.444	1.00	9.60
	ATOM	1431	O	246	24.308	49.219	47.429	1.00	11.47
5	ATOM	1432	N	247	23.538	47.130	47.706	1.00	9.86
	ATOM	1433	CA	247	24.858	46.577	48.007	1.00	10.45
	ATOM	1434	CB	247	24.738	45.084	48.336	1.00	9.21
	ATOM	1435	C	247	25.895	46.787	46.894	1.00	9.94
	ATOM	1436	O	247	27.072	47.006	47.177	1.00	10.23
10	ATOM	1437	N	248	25.465	46.701	45.638	1.00	9.68
	ATOM	1438	CA	248	26.388	46.894	44.527	1.00	9.78
	ATOM	1439	C	248	26.974	48.297	44.551	1.00	12.15
	ATOM	1440	O	248	28.177	48.499	44.354	1.00	11.20
	ATOM	1441	N	249	26.103	49.271	44.790	1.00	12.09
15	ATOM	1442	CA	249	26.494	50.674	44.873	1.00	12.50
	ATOM	1443	CB	249	25.246	51.506	45.210	1.00	12.82
	ATOM	1444	CG	249	25.528	52.995	45.337	1.00	13.95
	ATOM	1445	OD1	249	26.395	53.521	44.610	1.00	13.98
	ATOM	1446	OD2	249	24.851	53.647	46.159	1.00	13.82
20	ATOM	1447	C	249	27.562	50.795	45.961	1.00	12.92
	ATOM	1448	O	249	28.640	51.350	45.741	1.00	11.95
	ATOM	1449	N	250	27.255	50.251	47.133	1.00	13.21
	ATOM	1450	CA	250	28.178	50.277	48.259	1.00	13.25
	ATOM	1451	CB	250	27.585	49.479	49.424	1.00	14.69
25	ATOM	1452	OG	250	28.391	49.595	50.583	1.00	18.32
	ATOM	1453	C	250	29.557	49.705	47.876	1.00	12.60
	ATOM	1454	O	250	30.587	50.324	48.143	1.00	11.74
	ATOM	1455	N	251	29.574	48.530	47.251	1.00	10.27
	ATOM	1456	CA	251	30.840	47.908	46.847	1.00	11.25
30	ATOM	1457	CB	251	30.587	46.525	46.236	1.00	10.10
	ATOM	1458	CG	251	30.163	45.479	47.223	1.00	10.89
	ATOM	1459	CD2	251	29.970	44.084	46.957	1.00	10.95
	ATOM	1460	CE2	251	29.587	43.475	48.174	1.00	12.43
	ATOM	1461	CE3	251	30.086	43.288	45.808	1.00	9.38
35	ATOM	1462	CD1	251	29.895	45.657	48.554	1.00	10.57
	ATOM	1463	NE1	251	29.549	44.457	49.129	1.00	12.56
	ATOM	1464	CZ2	251	29.317	42.101	48.276	1.00	11.07
	ATOM	1465	CZ3	251	29.817	41.923	45.909	1.00	10.48
	ATOM	1466	CH2	251	29.437	41.345	47.135	1.00	9.03
40	ATOM	1467	C	251	31.641	48.751	45.852	1.00	10.66
	ATOM	1468	O	251	32.847	48.926	46.009	1.00	11.21
	ATOM	1469	N	252	30.972	49.266	44.824	1.00	10.93
	ATOM	1470	CA	252	31.654	50.075	43.824	1.00	10.15
	ATOM	1471	CB	252	30.691	50.462	42.686	1.00	10.20
45	ATOM	1472	CG	252	30.225	49.288	41.810	1.00	9.68
	ATOM	1473	CD	252	29.435	49.763	40.580	1.00	10.48
	ATOM	1474	NE	252	28.195	50.475	40.912	1.00	10.26
	ATOM	1475	CZ	252	27.039	49.892	41.215	1.00	12.09
	ATOM	1476	NH1	252	25.973	50.633	41.506	1.00	10.42
50	ATOM	1477	NH2	252	26.940	48.569	41.217	1.00	10.98
	ATOM	1478	C	252	32.271	51.337	44.440	1.00	11.46
	ATOM	1479	O	252	33.296	51.821	43.969	1.00	10.38
	ATOM	1480	N	253	31.657	51.852	45.505	1.00	13.01
	ATOM	1481	CA	253	32.147	53.065	46.157	1.00	13.62
55	ATOM	1482	CB	253	31.224	53.465	47.309	1.00	12.96
	ATOM	1483	OG	253	31.473	52.676	48.460	1.00	16.21
	ATOM	1484	C	253	33.575	52.932	46.685	1.00	12.79
	ATOM	1485	O	253	34.253	53.935	46.893	1.00	12.73
	ATOM	1486	N	254	34.025	51.699	46.903	1.00	14.11
60	ATOM	1487	CA	254	35.378	51.462	47.406	1.00	14.12
	ATOM	1488	CB	254	35.622	49.960	47.620	1.00	16.31

	ATOM	1	CG	MET	254	34.751	49.331	699	1.00	19.32
	ATOM	1490	SD	MET	254	35.231	47.629	49.106	1.00	25.77
	ATOM	1491	CE	MET	254	34.333	46.745	47.898	1.00	17.52
	ATOM	1492	C	MET	254	36.440	52.013	46.457	1.00	12.73
5	ATOM	1493	O	MET	254	37.585	52.214	46.849	1.00	14.95
	ATOM	1494	N	TYR	255	36.061	52.251	45.207	1.00	11.95
	ATOM	1495	CA	TYR	255	37.001	52.782	44.227	1.00	10.96
	ATOM	1496	CB	TYR	255	36.734	52.180	42.840	1.00	10.71
	ATOM	1497	CG	TYR	255	37.055	50.711	42.767	1.00	10.53
10	ATOM	1498	CD1	TYR	255	36.120	49.755	43.159	1.00	10.46
	ATOM	1499	CE1	TYR	255	36.441	48.401	43.183	1.00	10.93
	ATOM	1500	CD2	TYR	255	38.326	50.276	42.389	1.00	11.13
	ATOM	1501	CE2	TYR	255	38.661	48.915	42.415	1.00	11.62
	ATOM	1502	CZ	TYR	255	37.711	47.987	42.817	1.00	11.67
15	ATOM	1503	OH	TYR	255	38.039	46.653	42.896	1.00	10.68
	ATOM	1504	C	TYR	255	36.976	54.305	44.139	1.00	10.20
	ATOM	1505	O	TYR	255	37.845	54.898	43.505	1.00	11.25
	ATOM	1506	N	GLU	256	35.985	54.932	44.767	1.00	10.48
	ATOM	1507	CA	GLU	256	35.874	56.396	44.750	1.00	11.92
20	ATOM	1508	CB	GLU	256	36.950	57.018	45.649	1.00	12.76
	ATOM	1509	CG	GLU	256	36.925	56.528	47.097	1.00	16.04
	ATOM	1510	CD	GLU	256	37.925	57.263	47.993	1.00	20.13
	ATOM	1511	OE1	GLU	256	39.145	57.187	47.736	1.00	19.80
	ATOM	1512	OE2	GLU	256	37.487	57.917	48.959	1.00	23.10
25	ATOM	1513	C	GLU	256	36.040	56.925	43.327	1.00	11.30
	ATOM	1514	O	GLU	256	36.703	57.935	43.100	1.00	12.11
	ATOM	1515	N	THR	257	35.430	56.236	42.371	1.00	11.67
	ATOM	1516	CA	THR	257	35.537	56.607	40.965	1.00	11.88
	ATOM	1517	CB	THR	257	36.511	55.649	40.239	1.00	13.99
30	ATOM	1518	OG1	THR	257	37.788	55.701	40.889	1.00	13.92
	ATOM	1519	CG2	THR	257	36.679	56.043	38.775	1.00	13.03
	ATOM	1520	C	THR	257	34.167	56.555	40.296	1.00	11.09
	ATOM	1521	O	THR	257	33.691	55.490	39.918	1.00	10.49
	ATOM	1522	N	PRO	258	33.514	57.719	40.154	1.00	11.64
35	ATOM	1523	CD	PRO	258	33.992	59.028	40.638	1.00	11.87
	ATOM	1524	CA	PRO	258	32.186	57.842	39.539	1.00	12.51
	ATOM	1525	CB	PRO	258	31.953	59.352	39.526	1.00	13.07
	ATOM	1526	CG	PRO	258	32.703	59.817	40.754	1.00	13.28
	ATOM	1527	C	PRO	258	32.072	57.226	38.143	1.00	12.84
40	ATOM	1528	O	PRO	258	31.014	56.719	37.762	1.00	13.80
	ATOM	1529	N	SER	259	33.164	57.270	37.387	1.00	12.06
	ATOM	1530	CA	SER	259	33.182	56.728	36.030	1.00	13.03
	ATOM	1531	CB	SER	259	34.154	57.536	35.170	1.00	15.05
	ATOM	1532	OG	SER	259	35.466	57.473	35.707	1.00	14.74
45	ATOM	1533	C	SER	259	33.588	55.254	35.987	1.00	12.40
	ATOM	1534	O	SER	259	33.830	54.708	34.917	1.00	11.54
	ATOM	1535	N	LEU	260	33.649	54.615	37.150	1.00	12.21
	ATOM	1536	CA	LEU	260	34.060	53.214	37.243	1.00	12.51
	ATOM	1537	CB	LEU	260	33.766	52.665	38.648	1.00	11.05
50	ATOM	1538	CG	LEU	260	34.282	51.236	38.891	1.00	13.73
	ATOM	1539	CD1	LEU	260	35.808	51.214	38.751	1.00	10.71
	ATOM	1540	CD2	LEU	260	33.870	50.751	40.275	1.00	12.15
	ATOM	1541	C	LEU	260	33.465	52.256	36.207	1.00	13.15
	ATOM	1542	O	LEU	260	34.205	51.578	35.485	1.00	9.99
55	ATOM	1543	N	GLU	261	32.138	52.187	36.131	1.00	11.55
	ATOM	1544	CA	GLU	261	31.512	51.266	35.190	1.00	13.22
	ATOM	1545	CB	GLU	261	29.985	51.292	35.353	1.00	12.14
	ATOM	1546	CG	GLU	261	29.554	50.650	36.671	1.00	15.06
	ATOM	1547	CD	GLU	261	28.065	50.396	36.774	1.00	16.56
60	ATOM	1548	OE1	GLU	261	27.388	50.379	35.727	1.00	20.06
	ATOM	1549	OE2	GLU	261	27.574	50.197	37.906	1.00	17.33

	ATOM	1550	C	GLU	261	31.923	51.495	33.740	1.00	13.12
	ATOM	1551	O	GLU	261	32.193	50.538	33.011	1.00	11.67
	ATOM	1552	N	GLN	262	31.988	52.752	33.320	1.00	11.67
	ATOM	1553	CA	GLN	262	32.395	53.042	31.952	1.00	13.82
5	ATOM	1554	CB	GLN	262	32.128	54.508	31.607	1.00	15.74
	ATOM	1555	CG	GLN	262	30.659	54.915	31.661	1.00	24.70
	ATOM	1556	CD	GLN	262	30.455	56.378	31.298	1.00	29.02
	ATOM	1557	OE1	GLN	262	30.558	56.762	30.132	1.00	35.05
	ATOM	1558	NE2	GLN	262	30.183	57.205	32.300	1.00	32.50
10	ATOM	1559	C	GLN	262	33.883	52.733	31.760	1.00	12.94
	ATOM	1560	O	GLN	262	34.285	52.213	30.715	1.00	11.76
	ATOM	1561	N	ASP	263	34.696	53.059	32.764	1.00	11.79
	ATOM	1562	CA	ASP	263	36.131	52.805	32.689	1.00	12.07
	ATOM	1563	CB	ASP	263	36.845	53.238	33.975	1.00	12.41
15	ATOM	1564	CG	ASP	263	36.890	54.742	34.145	1.00	13.78
	ATOM	1565	OD1	ASP	263	36.821	55.453	33.127	1.00	14.89
	ATOM	1566	OD2	ASP	263	37.015	55.211	35.296	1.00	15.49
	ATOM	1567	C	ASP	263	36.410	51.328	32.469	1.00	13.01
	ATOM	1568	O	ASP	263	37.190	50.957	31.593	1.00	11.20
20	ATOM	1569	N	LEU	264	35.773	50.495	33.284	1.00	12.13
	ATOM	1570	CA	LEU	264	35.958	49.055	33.207	1.00	13.22
	ATOM	1571	CB	LEU	264	35.259	48.379	34.393	1.00	12.89
	ATOM	1572	CG	LEU	264	35.758	48.893	35.750	1.00	17.46
	ATOM	1573	CD1	LEU	264	35.091	48.124	36.883	1.00	15.64
25	ATOM	1574	CD2	LEU	264	37.281	48.756	35.826	1.00	18.10
	ATOM	1575	C	LEU	264	35.449	48.498	31.884	1.00	13.15
	ATOM	1576	O	LEU	264	36.049	47.591	31.318	1.00	12.41
	ATOM	1577	N	GLU	265	34.348	49.051	31.387	1.00	15.01
	ATOM	1578	CA	GLU	265	33.788	48.612	30.114	1.00	18.16
30	ATOM	1579	CB	GLU	265	32.457	49.326	29.856	1.00	20.13
	ATOM	1580	CG	GLU	265	31.833	49.068	28.485	1.00	26.44
	ATOM	1581	CD	GLU	265	31.578	47.599	28.209	1.00	31.50
	ATOM	1582	OE1	GLU	265	31.057	46.900	29.108	1.00	33.66
	ATOM	1583	OE2	GLU	265	31.886	47.145	27.085	1.00	34.88
35	ATOM	1584	C	GLU	265	34.773	48.889	28.966	1.00	18.71
	ATOM	1585	O	GLU	265	34.969	48.038	28.094	1.00	17.84
	ATOM	1586	N	ARG	266	35.389	50.072	28.971	1.00	16.94
	ATOM	1587	CA	ARG	266	36.355	50.425	27.932	1.00	17.44
	ATOM	1588	CB	ARG	266	36.840	51.873	28.101	1.00	20.53
40	ATOM	1589	CG	ARG	266	35.900	52.936	27.550	1.00	22.86
	ATOM	1590	CD	ARG	266	36.534	54.323	27.645	1.00	23.46
	ATOM	1591	NE	ARG	266	36.579	54.824	29.016	1.00	25.90
	ATOM	1592	CZ	ARG	266	35.566	55.437	29.623	1.00	28.47
	ATOM	1593	NH1	ARG	266	34.423	55.634	28.979	1.00	29.44
45	ATOM	1594	NH2	ARG	266	35.693	55.851	30.876	1.00	30.11
	ATOM	1595	C	ARG	266	37.554	49.486	27.986	1.00	15.99
	ATOM	1596	O	ARG	266	38.055	49.042	26.955	1.00	15.42
	ATOM	1597	N	LEU	267	38.014	49.188	29.197	1.00	15.40
	ATOM	1598	CA	LEU	267	39.154	48.299	29.372	1.00	13.76
50	ATOM	1599	CB	LEU	267	39.539	48.228	30.853	1.00	13.89
	ATOM	1600	CG	LEU	267	40.091	49.539	31.438	1.00	13.95
	ATOM	1601	CD1	LEU	267	40.200	49.433	32.952	1.00	12.21
	ATOM	1602	CD2	LEU	267	41.462	49.849	30.815	1.00	12.02
	ATOM	1603	C	LEU	267	38.836	46.907	28.830	1.00	15.08
55	ATOM	1604	O	LEU	267	39.655	46.296	28.135	1.00	13.11
	ATOM	1605	N	PHE	268	37.642	46.412	29.136	1.00	14.37
	ATOM	1606	CA	PHE	268	37.233	45.098	28.658	1.00	14.85
	ATOM	1607	CB	PHE	268	35.841	44.735	29.172	1.00	15.58
	ATOM	1608	CG	PHE	268	35.308	43.453	28.590	1.00	19.42
60	ATOM	1609	CD1	PHE	268	35.795	42.219	29.026	1.00	17.97
	ATOM	1610	CD2	PHE	268	34.373	43.480	27.561	1.00	17.52

	ATOM	1611	CE1	PHE	268	35.360	41.036	26.439	1.00	20.24
	ATOM	1612	CE2	PHE	268	33.932	42.301	26.966	1.00	20.46
	ATOM	1613	CZ	PHE	268	34.428	41.076	27.407	1.00	20.47
	ATOM	1614	C	PHE	268	37.222	45.061	27.132	1.00	15.22
5	ATOM	1615	O	PHE	268	37.717	44.113	26.521	1.00	15.06
	ATOM	1616	N	GLN	269	36.649	46.094	26.521	1.00	14.71
	ATOM	1617	CA	GLN	269	36.570	46.174	25.066	1.00	15.04
	ATOM	1618	CB	GLN	269	35.797	47.427	24.642	1.00	18.56
	ATOM	1619	CG	GLN	269	34.296	47.359	24.893	1.00	23.06
10	ATOM	1620	CD	GLN	269	33.650	46.149	24.238	1.00	25.97
	ATOM	1621	OE1	GLN	269	33.962	45.805	23.098	1.00	27.07
	ATOM	1622	NE2	GLN	269	32.736	45.506	24.953	1.00	27.62
	ATOM	1623	C	GLN	269	37.936	46.172	24.389	1.00	14.54
	ATOM	1624	O	GLN	269	38.082	45.640	23.297	1.00	13.32
15	ATOM	1625	N	GLU	270	38.936	46.767	25.030	1.00	15.04
	ATOM	1626	CA	GLU	270	40.269	46.802	24.445	1.00	17.22
	ATOM	1627	CB	GLU	270	41.152	47.805	25.188	1.00	20.98
	ATOM	1628	CG	GLU	270	40.700	49.238	25.008	1.00	27.35
	ATOM	1629	CD	GLU	270	41.710	50.229	25.524	1.00	33.16
20	ATOM	1630	OE1	GLU	270	42.862	50.199	25.039	1.00	38.02
	ATOM	1631	OE2	GLU	270	41.356	51.040	26.409	1.00	36.92
	ATOM	1632	C	GLU	270	40.952	45.437	24.412	1.00	15.82
	ATOM	1633	O	GLU	270	41.820	45.196	23.573	1.00	14.50
	ATOM	1634	N	LEU	271	40.567	44.548	25.320	1.00	13.35
25	ATOM	1635	CA	LEU	271	41.156	43.214	25.356	1.00	15.36
	ATOM	1636	CB	LEU	271	41.353	42.771	26.805	1.00	16.31
	ATOM	1637	CG	LEU	271	42.710	43.258	27.322	1.00	19.74
	ATOM	1638	CD1	LEU	271	42.552	44.028	28.610	1.00	19.63
	ATOM	1639	CD2	LEU	271	43.631	42.059	27.493	1.00	19.25
30	ATOM	1640	C	LEU	271	40.340	42.177	24.583	1.00	15.26
	ATOM	1641	O	LEU	271	40.684	40.993	24.545	1.00	15.34
	ATOM	1642	N	GLN	272	39.267	42.637	23.951	1.00	15.74
	ATOM	1643	CA	GLN	272	38.395	41.772	23.163	1.00	16.76
	ATOM	1644	CB	GLN	272	37.193	42.572	22.663	1.00	18.77
35	ATOM	1645	CG	GLN	272	36.064	42.594	23.656	1.00	19.01
	ATOM	1646	CD	GLN	272	35.339	41.272	23.691	1.00	20.95
	ATOM	1647	OE1	GLN	272	34.458	41.017	22.869	1.00	24.44
	ATOM	1648	NE2	GLN	272	35.717	40.412	24.627	1.00	20.60
	ATOM	1649	C	GLN	272	39.099	41.109	21.986	1.00	18.21
40	ATOM	1650	O	GLN	272	38.980	39.899	21.780	1.00	19.85
	ATOM	1651	N	PRO	273	39.831	41.892	21.181	1.00	19.01
	ATOM	1652	CD	PRO	273	39.939	43.364	21.145	1.00	19.93
	ATOM	1653	CA	PRO	273	40.525	41.290	20.042	1.00	18.86
	ATOM	1654	CB	PRO	273	41.321	42.465	19.473	1.00	20.13
45	ATOM	1655	CG	PRO	273	40.387	43.624	19.711	1.00	18.58
	ATOM	1656	C	PRO	273	41.418	40.135	20.480	1.00	19.29
	ATOM	1657	O	PRO	273	41.425	39.067	19.864	1.00	20.36
	ATOM	1658	N	LEU	274	42.161	40.351	21.558	1.00	17.91
	ATOM	1659	CA	LEU	274	43.062	39.335	22.073	1.00	15.61
50	ATOM	1660	CB	LEU	274	43.958	39.950	23.148	1.00	19.23
	ATOM	1661	CG	LEU	274	45.126	39.145	23.717	1.00	21.54
	ATOM	1662	CD1	LEU	274	45.847	38.382	22.608	1.00	24.13
	ATOM	1663	CD2	LEU	274	46.079	40.107	24.415	1.00	22.56
	ATOM	1664	C	LEU	274	42.294	38.128	22.622	1.00	15.23
55	ATOM	1665	O	LEU	274	42.626	36.987	22.305	1.00	13.78
	ATOM	1666	N	TYR	275	41.264	38.369	23.432	1.00	12.57
	ATOM	1667	CA	TYR	275	40.494	37.255	23.977	1.00	12.75
	ATOM	1668	CB	TYR	275	39.449	37.723	24.988	1.00	11.47
	ATOM	1669	CG	TYR	275	38.643	36.554	25.512	1.00	11.88
60	ATOM	1670	CD1	TYR	275	39.245	35.574	26.298	1.00	9.65
	ATOM	1671	CE1	TYR	275	38.544	34.449	26.711	1.00	11.95

	ATOM	1672	TYR	275	37.306	36.382	25.11	1.00	10.41
	ATOM	1673	CE2 TYR	275	36.591	35.258	25.556	1.00	10.77
	ATOM	1674	CZ TYR	275	37.216	34.299	26.335	1.00	11.79
	ATOM	1675	OH TYR	275	36.518	33.196	26.758	1.00	12.85
5	ATOM	1676	C TYR	275	39.779	36.457	22.890	1.00	12.15
	ATOM	1677	O TYR	275	39.819	35.230	22.886	1.00	11.27
	ATOM	1678	N LEU	276	39.116	37.155	21.976	1.00	12.64
	ATOM	1679	CA LEU	276	38.400	36.478	20.903	1.00	12.64
	ATOM	1680	CB LEU	276	37.689	37.499	20.016	1.00	12.92
10	ATOM	1681	CG LEU	276	36.589	38.299	20.719	1.00	15.08
	ATOM	1682	CD1 LEU	276	35.965	39.298	19.744	1.00	13.79
	ATOM	1683	CD2 LEU	276	35.534	37.338	21.267	1.00	16.31
	ATOM	1684	C LEU	276	39.316	35.601	20.057	1.00	12.23
	ATOM	1685	O LEU	276	38.913	34.530	19.608	1.00	13.24
15	ATOM	1686	N ASN	277	40.544	36.054	19.834	1.00	10.74
	ATOM	1687	CA ASN	277	41.479	35.269	19.041	1.00	11.60
	ATOM	1688	CB ASN	277	42.654	36.139	18.593	1.00	11.61
	ATOM	1689	CG ASN	277	42.393	36.814	17.257	1.00	16.00
	ATOM	1690	OD1 ASN	277	42.442	36.164	16.207	1.00	14.40
20	ATOM	1691	ND2 ASN	277	42.094	38.115	17.287	1.00	13.69
	ATOM	1692	C ASN	277	41.962	34.051	19.827	1.00	11.77
	ATOM	1693	O ASN	277	42.124	32.969	19.266	1.00	11.85
	ATOM	1694	N LEU	278	42.180	34.227	21.125	1.00	10.50
	ATOM	1695	CA LEU	278	42.624	33.116	21.958	1.00	10.97
25	ATOM	1696	CB LEU	278	42.955	33.600	23.372	1.00	8.91
	ATOM	1697	CG LEU	278	43.363	32.498	24.359	1.00	11.30
	ATOM	1698	CD1 LEU	278	44.732	31.924	23.970	1.00	9.95
	ATOM	1699	CD2 LEU	278	43.404	33.067	25.770	1.00	9.64
	ATOM	1700	C LEU	278	41.496	32.089	22.023	1.00	9.88
30	ATOM	1701	O LEU	278	41.733	30.886	21.922	1.00	9.70
	ATOM	1702	N HIS	279	40.274	32.589	22.193	1.00	9.53
	ATOM	1703	CA HIS	279	39.068	31.762	22.272	1.00	10.82
	ATOM	1704	CB HIS	279	37.836	32.667	22.421	1.00	10.16
	ATOM	1705	CG HIS	279	36.526	31.938	22.379	1.00	10.69
35	ATOM	1706	CD2 HIS	279	35.770	31.528	21.333	1.00	7.62
	ATOM	1707	ND1 HIS	279	35.821	31.601	23.516	1.00	12.88
	ATOM	1708	CE1 HIS	279	34.685	31.019	23.172	1.00	7.41
	ATOM	1709	NE2 HIS	279	34.629	30.963	21.853	1.00	10.98
	ATOM	1710	C HIS	279	38.914	30.886	21.030	1.00	10.36
40	ATOM	1711	O HIS	279	38.667	29.685	21.133	1.00	10.76
	ATOM	1712	N ALA	280	39.066	31.489	19.857	1.00	10.79
	ATOM	1713	CA ALA	280	38.931	30.752	18.601	1.00	11.15
	ATOM	1714	CB ALA	280	38.930	31.723	17.429	1.00	9.52
	ATOM	1715	C ALA	280	40.032	29.705	18.422	1.00	11.20
45	ATOM	1716	O ALA	280	39.780	28.600	17.938	1.00	10.26
	ATOM	1717	N TYR	281	41.255	30.053	18.810	1.00	11.54
	ATOM	1718	CA TYR	281	42.373	29.120	18.692	1.00	11.98
	ATOM	1719	CB TYR	281	43.685	29.823	19.052	1.00	10.00
	ATOM	1720	CG TYR	281	44.895	28.914	19.065	1.00	12.10
50	ATOM	1721	CD1 TYR	281	45.461	28.446	17.879	1.00	13.19
	ATOM	1722	CE1 TYR	281	46.567	27.594	17.895	1.00	11.96
	ATOM	1723	CD2 TYR	281	45.465	28.507	20.271	1.00	10.46
	ATOM	1724	CE2 TYR	281	46.564	27.660	20.299	1.00	12.98
	ATOM	1725	CZ TYR	281	47.112	27.205	19.109	1.00	14.87
55	ATOM	1726	OH TYR	281	48.212	26.367	19.146	1.00	14.76
	ATOM	1727	C TYR	281	42.156	27.909	19.606	1.00	12.24
	ATOM	1728	O TYR	281	42.339	26.764	19.189	1.00	12.81
	ATOM	1729	N VAL	282	41.764	28.167	20.852	1.00	11.07
	ATOM	1730	CA VAL	282	41.517	27.093	21.809	1.00	10.51
60	ATOM	1731	CB VAL	282	41.246	27.656	23.231	1.00	10.61
	ATOM	1732	CG1 VAL	282	40.816	26.529	24.181	1.00	8.01

	ATOM	1733	CG2	VAL	282	42.504	28.335	8.760	1.00	10.58
	ATOM	1734	C	VAL	282	40.331	26.240	21.359	1.00	11.07
	ATOM	1735	O	VAL	282	40.357	25.012	21.462	1.00	11.90
	ATOM	1736	N	ARG	283	39.291	26.893	20.859	1.00	9.21
5	ATOM	1737	CA	ARG	283	38.113	26.179	20.379	1.00	10.93
	ATOM	1738	CB	ARG	283	37.077	27.186	19.859	1.00	9.04
	ATOM	1739	CG	ARG	283	35.802	26.566	19.293	1.00	7.71
	ATOM	1740	CD	ARG	283	34.800	27.655	18.923	1.00	8.79
	ATOM	1741	NE	ARG	283	35.371	28.597	17.966	1.00	8.59
10	ATOM	1742	CZ	ARG	283	34.837	29.773	17.651	1.00	12.17
	ATOM	1743	NH1	ARG	283	33.702	30.174	18.219	1.00	8.02
	ATOM	1744	NH2	ARG	283	35.445	30.552	16.763	1.00	9.21
	ATOM	1745	C	ARG	283	38.520	25.191	19.268	1.00	11.88
	ATOM	1746	O	ARG	283	38.026	24.065	19.210	1.00	11.57
15	ATOM	1747	N	ARG	284	39.432	25.615	18.396	1.00	12.83
	ATOM	1748	CA	ARG	284	39.905	24.759	17.305	1.00	13.40
	ATOM	1749	CB	ARG	284	40.815	25.557	16.362	1.00	12.91
	ATOM	1750	CG	ARG	284	41.550	24.721	15.314	1.00	16.01
	ATOM	1751	CD	ARG	284	40.608	24.122	14.274	1.00	14.55
20	ATOM	1752	NE	ARG	284	39.864	25.154	13.555	1.00	13.70
	ATOM	1753	CZ	ARG	284	39.073	24.917	12.513	1.00	15.26
	ATOM	1754	NH1	ARG	284	38.433	25.921	11.927	1.00	12.96
	ATOM	1755	NH2	ARG	284	38.930	23.679	12.049	1.00	13.60
	ATOM	1756	C	ARG	284	40.657	23.546	17.866	1.00	13.94
25	ATOM	1757	O	ARG	284	40.452	22.414	17.416	1.00	14.76
	ATOM	1758	N	ALA	285	41.517	23.781	18.852	1.00	12.64
	ATOM	1759	CA	ALA	285	42.277	22.698	19.468	1.00	12.04
	ATOM	1760	CB	ALA	285	43.289	23.259	20.453	1.00	12.45
	ATOM	1761	C	ALA	285	41.349	21.709	20.172	1.00	13.35
30	ATOM	1762	O	ALA	285	41.596	20.500	20.162	1.00	14.01
	ATOM	1763	N	LEU	286	40.287	22.220	20.791	1.00	11.56
	ATOM	1764	CA	LEU	286	39.330	21.356	21.478	1.00	12.33
	ATOM	1765	CB	LEU	286	38.364	22.189	22.326	1.00	10.45
	ATOM	1766	CG	LEU	286	38.952	22.846	23.583	1.00	13.14
35	ATOM	1767	CD1	LEU	286	37.884	23.713	24.255	1.00	11.79
	ATOM	1768	CD2	LEU	286	39.452	21.767	24.548	1.00	9.81
	ATOM	1769	C	LEU	286	38.553	20.529	20.453	1.00	11.97
	ATOM	1770	O	LEU	286	38.225	19.368	20.693	1.00	12.10
	ATOM	1771	N	HIS	287	38.257	21.146	19.315	1.00	12.58
40	ATOM	1772	CA	HIS	287	37.544	20.482	18.229	1.00	13.37
	ATOM	1773	CB	HIS	287	37.351	21.476	17.073	1.00	13.36
	ATOM	1774	CG	HIS	287	36.674	20.902	15.863	1.00	12.74
	ATOM	1775	CD2	HIS	287	35.383	20.956	15.455	1.00	10.37
	ATOM	1776	ND1	HIS	287	37.361	20.238	14.868	1.00	12.14
45	ATOM	1777	CE1	HIS	287	36.525	19.914	13.897	1.00	10.26
	ATOM	1778	NE2	HIS	287	35.319	20.339	14.228	1.00	14.44
	ATOM	1779	C	HIS	287	38.401	19.294	17.790	1.00	14.98
	ATOM	1780	O	HIS	287	37.898	18.196	17.561	1.00	14.57
	ATOM	1781	N	ARG	288	39.707	19.529	17.701	1.00	15.29
50	ATOM	1782	CA	ARG	288	40.666	18.506	17.305	1.00	17.69
	ATOM	1783	CB	ARG	288	42.068	19.112	17.249	1.00	21.34
	ATOM	1784	CG	ARG	288	42.685	19.208	15.862	1.00	27.31
	ATOM	1785	CD	ARG	288	43.749	20.293	15.841	1.00	29.77
	ATOM	1786	NE	ARG	288	44.569	20.250	17.048	1.00	29.56
55	ATOM	1787	CZ	ARG	288	45.157	21.311	17.586	1.00	29.93
	ATOM	1788	NH1	ARG	288	45.019	22.505	17.021	1.00	30.44
	ATOM	1789	NH2	ARG	288	45.874	21.183	18.696	1.00	31.11
	ATOM	1790	C	ARG	288	40.674	17.329	18.276	1.00	17.37
	ATOM	1791	O	ARG	288	40.713	16.169	17.861	1.00	16.21
60	ATOM	1792	N	HIS	289	40.629	17.629	19.571	1.00	17.16
	ATOM	1793	CA	HIS	289	40.668	16.587	20.590	1.00	17.12

	ATOM	1794	HIS	289	41.281	17.132	21.000	1.00	18.15
	ATOM	1795	CG HIS	289	41.421	16.098	22.954	1.00	21.15
	ATOM	1796	CD2 HIS	289	40.616	15.780	23.997	1.00	21.55
	ATOM	1797	ND1 HIS	289	42.462	15.195	22.985	1.00	22.19
5	ATOM	1798	CE1 HIS	289	42.292	14.363	23.997	1.00	21.47
	ATOM	1799	NE2 HIS	289	41.179	14.697	24.627	1.00	25.04
	ATOM	1800	C HIS	289	39.352	15.904	20.947	1.00	16.83
	ATOM	1801	O HIS	289	39.298	14.681	21.043	1.00	16.83
	ATOM	1802	N TYR	290	38.294	16.683	21.153	1.00	16.34
10	ATOM	1803	CA TYR	290	37.016	16.110	21.549	1.00	15.13
	ATOM	1804	CB TYR	290	36.333	17.025	22.571	1.00	14.53
	ATOM	1805	CG TYR	290	37.073	17.093	23.894	1.00	14.22
	ATOM	1806	CD1 TYR	290	37.842	18.208	24.237	1.00	12.56
	ATOM	1807	CE1 TYR	290	38.547	18.255	25.445	1.00	12.09
15	ATOM	1808	CD2 TYR	290	37.025	16.026	24.791	1.00	13.17
	ATOM	1809	CE2 TYR	290	37.721	16.062	25.995	1.00	13.22
	ATOM	1810	CZ TYR	290	38.480	17.175	26.316	1.00	14.11
	ATOM	1811	OH TYR	290	39.186	17.186	27.496	1.00	13.69
	ATOM	1812	C TYR	290	36.042	15.746	20.434	1.00	16.43
20	ATOM	1813	O TYR	290	34.980	15.180	20.703	1.00	16.48
	ATOM	1814	N GLY	291	36.395	16.068	19.194	1.00	17.05
	ATOM	1815	CA GLY	291	35.535	15.730	18.072	1.00	15.48
	ATOM	1816	C GLY	291	34.611	16.813	17.552	1.00	13.32
	ATOM	1817	O GLY	291	34.111	17.647	18.305	1.00	11.67
25	ATOM	1818	N ALA	292	34.369	16.781	16.248	1.00	13.25
	ATOM	1819	CA ALA	292	33.504	17.755	15.590	1.00	13.14
	ATOM	1820	CB ALA	292	33.530	17.532	14.077	1.00	15.01
	ATOM	1821	C ALA	292	32.065	17.708	16.099	1.00	13.40
	ATOM	1822	O ALA	292	31.362	18.713	16.056	1.00	12.55
30	ATOM	1823	N GLN	293	31.625	16.545	16.575	1.00	12.64
	ATOM	1824	CA GLN	293	30.265	16.407	17.081	1.00	13.50
	ATOM	1825	CB GLN	293	29.888	14.919	17.199	1.00	13.51
	ATOM	1826	CG GLN	293	29.794	14.161	15.863	1.00	12.95
	ATOM	1827	CD GLN	293	28.496	14.423	15.109	1.00	14.29
35	ATOM	1828	OE1 GLN	293	27.607	15.121	15.597	1.00	13.82
	ATOM	1829	NE2 GLN	293	28.382	13.853	13.909	1.00	12.74
	ATOM	1830	C GLN	293	30.071	17.091	18.436	1.00	14.40
	ATOM	1831	O GLN	293	28.938	17.278	18.879	1.00	15.91
	ATOM	1832	N HIS	294	31.168	17.487	19.081	1.00	13.64
40	ATOM	1833	CA HIS	294	31.088	18.118	20.397	1.00	14.94
	ATOM	1834	CB HIS	294	31.831	17.248	21.413	1.00	14.73
	ATOM	1835	CG HIS	294	31.381	15.820	21.403	1.00	17.46
	ATOM	1836	CD2 HIS	294	32.001	14.693	20.977	1.00	16.75
	ATOM	1837	ND1 HIS	294	30.113	15.438	21.787	1.00	19.13
45	ATOM	1838	CE1 HIS	294	29.970	14.139	21.592	1.00	18.70
	ATOM	1839	NE2 HIS	294	31.100	13.664	21.101	1.00	18.34
	ATOM	1840	C HIS	294	31.593	19.559	20.476	1.00	15.34
	ATOM	1841	O HIS	294	31.475	20.204	21.519	1.00	16.59
	ATOM	1842	N ILE	295	32.147	20.066	19.379	1.00	13.77
50	ATOM	1843	CA ILE	295	32.654	21.435	19.352	1.00	13.59
	ATOM	1844	CB ILE	295	34.209	21.474	19.346	1.00	13.71
	ATOM	1845	CG2 ILE	295	34.695	22.905	19.124	1.00	14.49
	ATOM	1846	CG1 ILE	295	34.763	20.904	20.656	1.00	14.93
	ATOM	1847	CD1 ILE	295	34.360	21.684	21.906	1.00	14.38
55	ATOM	1848	C ILE	295	32.154	22.141	18.107	1.00	13.18
	ATOM	1849	O ILE	295	32.437	21.712	16.994	1.00	15.59
	ATOM	1850	N ASN	296	31.395	23.214	18.297	1.00	12.79
	ATOM	1851	CA ASN	296	30.878	23.992	17.175	1.00	13.84
	ATOM	1852	CB ASN	296	29.535	24.632	17.549	1.00	13.94
60	ATOM	1853	CG ASN	296	28.943	25.462	16.419	1.00	17.67
	ATOM	1854	OD1 ASN	296	29.597	25.724	15.408	1.00	16.28

	ATOM	1854	ND2	ASN	296	27.700	25.890	16.595	1.00	20.03
	ATOM	1856	C	ASN	296	31.917	25.076	16.897	1.00	13.19
	ATOM	1857	O	ASN	296	32.123	25.966	17.724	1.00	13.14
	ATOM	1858	N	LEU	297	32.570	25.001	15.742	1.00	12.09
5	ATOM	1859	CA	LEU	297	33.608	25.964	15.386	1.00	13.05
	ATOM	1860	CB	LEU	297	34.308	25.528	14.097	1.00	14.01
	ATOM	1861	CG	LEU	297	35.176	24.265	14.185	1.00	14.42
	ATOM	1862	CD1	LEU	297	35.551	23.810	12.787	1.00	14.91
	ATOM	1863	CD2	LEU	297	36.426	24.540	15.017	1.00	11.68
10	ATOM	1864	C	LEU	297	33.130	27.408	15.253	1.00	13.77
	ATOM	1865	O	LEU	297	33.945	28.321	15.103	1.00	13.21
	ATOM	1866	N	GLU	298	31.818	27.621	15.304	1.00	13.89
	ATOM	1867	CA	GLU	298	31.275	28.975	15.210	1.00	16.15
	ATOM	1868	CB	GLU	298	30.452	29.133	13.926	1.00	18.06
15	ATOM	1869	CG	GLU	298	31.227	28.791	12.659	1.00	23.45
	ATOM	1870	CD	GLU	298	30.389	28.914	11.394	1.00	27.52
	ATOM	1871	OE1	GLU	298	29.209	28.504	11.411	1.00	30.58
	ATOM	1872	OE2	GLU	298	30.915	29.407	10.376	1.00	29.39
	ATOM	1873	C	GLU	298	30.403	29.282	16.424	1.00	15.59
20	ATOM	1874	O	GLU	298	29.621	30.236	16.414	1.00	15.76
	ATOM	1875	N	GLY	299	30.538	28.472	17.472	1.00	12.59
	ATOM	1876	CA	GLY	299	29.732	28.683	18.659	1.00	11.43
	ATOM	1877	C	GLY	299	30.514	28.756	19.956	1.00	12.49
	ATOM	1878	O	GLY	299	31.749	28.812	19.945	1.00	12.02
25	ATOM	1879	N	PRO	300	29.815	28.762	21.104	1.00	11.77
	ATOM	1880	CD	PRO	300	28.348	28.749	21.265	1.00	11.48
	ATOM	1881	CA	PRO	300	30.484	28.829	22.406	1.00	12.78
	ATOM	1882	CB	PRO	300	29.341	29.164	23.358	1.00	13.30
	ATOM	1883	CG	PRO	300	28.183	28.440	22.741	1.00	13.51
30	ATOM	1884	C	PRO	300	31.176	27.513	22.761	1.00	13.23
	ATOM	1885	O	PRO	300	30.857	26.465	22.204	1.00	11.48
	ATOM	1886	N	ILE	301	32.118	27.581	23.693	1.00	12.03
	ATOM	1887	CA	ILE	301	32.870	26.412	24.137	1.00	12.06
	ATOM	1888	CB	ILE	301	34.329	26.807	24.481	1.00	12.23
35	ATOM	1889	CG2	ILE	301	35.087	25.601	25.038	1.00	11.68
	ATOM	1890	CG1	ILE	301	35.017	27.390	23.241	1.00	11.62
	ATOM	1891	CD1	ILE	301	36.392	27.983	23.521	1.00	9.44
	ATOM	1892	C	ILE	301	32.236	25.807	25.388	1.00	12.04
	ATOM	1893	O	ILE	301	31.880	26.535	26.318	1.00	10.31
40	ATOM	1894	N	PRO	302	32.066	24.469	25.421	1.00	11.07
	ATOM	1895	CD	PRO	302	32.244	23.489	24.336	1.00	12.03
	ATOM	1896	CA	PRO	302	31.472	23.833	26.602	1.00	11.31
	ATOM	1897	CB	PRO	302	31.529	22.348	26.257	1.00	10.99
	ATOM	1898	CG	PRO	302	31.324	22.358	24.774	1.00	12.05
45	ATOM	1899	C	PRO	302	32.319	24.201	27.826	1.00	9.53
	ATOM	1900	O	PRO	302	33.537	24.067	27.809	1.00	9.50
	ATOM	1901	N	ALA	303	31.655	24.657	28.879	1.00	10.56
	ATOM	1902	CA	ALA	303	32.313	25.124	30.097	1.00	10.69
	ATOM	1903	CB	ALA	303	31.274	25.775	31.005	1.00	8.77
50	ATOM	1904	C	ALA	303	33.164	24.162	30.914	1.00	11.62
	ATOM	1905	O	ALA	303	33.903	24.603	31.792	1.00	10.65
	ATOM	1906	N	HIS	304	33.084	22.863	30.644	1.00	12.09
	ATOM	1907	CA	HIS	304	33.866	21.903	31.428	1.00	12.58
	ATOM	1908	CB	HIS	304	33.017	20.657	31.721	1.00	11.82
55	ATOM	1909	CG	HIS	304	32.640	19.875	30.500	1.00	14.31
	ATOM	1910	CD2	HIS	304	32.678	18.544	30.246	1.00	12.99
	ATOM	1911	ND1	HIS	304	32.127	20.466	29.365	1.00	15.10
	ATOM	1912	CE1	HIS	304	31.866	19.534	28.465	1.00	13.57
	ATOM	1913	NE2	HIS	304	32.191	18.359	28.975	1.00	14.81
60	ATOM	1914	C	HIS	304	35.189	21.465	30.801	1.00	12.09
	ATOM	1915	O	HIS	304	35.922	20.670	31.392	1.00	10.75

	ATOM	1916	LEU	305	35.516	22.004	29.888	1.00	12.26	
	ATOM	1917	CA	LEU	305	36.728	21.590	28.924	1.00	11.26
	ATOM	1918	CB	LEU	305	36.394	21.420	27.443	1.00	9.94
	ATOM	1919	CG	LEU	305	35.159	20.564	27.149	1.00	10.57
5	ATOM	1920	CD1	LEU	305	34.896	20.538	25.642	1.00	10.40
	ATOM	1921	CD2	LEU	305	35.377	19.153	27.697	1.00	9.11
	ATOM	1922	C	LEU	305	37.968	22.466	29.043	1.00	12.64
	ATOM	1923	O	LEU	305	38.973	22.197	28.380	1.00	12.19
	ATOM	1924	N	LEU	306	37.922	23.490	29.889	1.00	13.29
10	ATOM	1925	CA	LEU	306	39.051	24.405	30.001	1.00	14.22
	ATOM	1926	CB	LEU	306	38.537	25.846	30.141	1.00	11.93
	ATOM	1927	CG	LEU	306	37.738	26.440	28.970	1.00	14.40
	ATOM	1928	CD1	LEU	306	38.488	26.212	27.652	1.00	12.20
	ATOM	1929	CD2	LEU	306	36.353	25.805	28.910	1.00	14.99
15	ATOM	1930	C	LEU	306	40.104	24.122	31.076	1.00	14.70
	ATOM	1931	O	LEU	306	41.017	24.925	31.267	1.00	15.61
	ATOM	1932	N	GLY	307	39.980	22.989	31.765	1.00	14.31
	ATOM	1933	CA	GLY	307	40.955	22.613	32.777	1.00	12.37
	ATOM	1934	C	GLY	307	40.767	23.242	34.145	1.00	14.30
20	ATOM	1935	O	GLY	307	41.596	23.064	35.045	1.00	12.62
	ATOM	1936	N	ASN	308	39.668	23.967	34.307	1.00	11.75
	ATOM	1937	CA	ASN	308	39.373	24.644	35.558	1.00	12.13
	ATOM	1938	CB	ASN	308	39.906	26.086	35.480	1.00	10.17
	ATOM	1939	CG	ASN	308	39.427	26.967	36.622	1.00	11.14
25	ATOM	1940	OD1	ASN	308	38.327	27.522	36.573	1.00	10.87
	ATOM	1941	ND2	ASN	308	40.254	27.104	37.655	1.00	9.94
	ATOM	1942	C	ASN	308	37.867	24.597	35.812	1.00	10.98
	ATOM	1943	O	ASN	308	37.069	24.750	34.894	1.00	10.76
	ATOM	1944	N	MET	309	37.493	24.369	37.066	1.00	10.81
30	ATOM	1945	CA	MET	309	36.094	24.255	37.453	1.00	11.22
	ATOM	1946	CB	MET	309	35.984	24.189	38.984	1.00	12.08
	ATOM	1947	CG	MET	309	34.568	23.932	39.491	1.00	12.10
	ATOM	1948	SD	MET	309	33.855	22.420	38.792	1.00	12.04
	ATOM	1949	CE	MET	309	34.496	21.188	39.955	1.00	12.99
35	ATOM	1950	C	MET	309	35.189	25.365	36.925	1.00	12.07
	ATOM	1951	O	MET	309	34.038	25.110	36.562	1.00	11.18
	ATOM	1952	N	TRP	310	35.709	26.588	36.877	1.00	10.53
	ATOM	1953	CA	TRP	310	34.928	27.735	36.418	1.00	11.65
	ATOM	1954	CB	TRP	310	35.020	28.856	37.456	1.00	10.85
40	ATOM	1955	CG	TRP	310	34.629	28.367	38.808	1.00	10.71
	ATOM	1956	CD2	TRP	310	35.509	27.879	39.825	1.00	10.32
	ATOM	1957	CE2	TRP	310	34.702	27.370	40.866	1.00	10.65
	ATOM	1958	CE3	TRP	310	36.905	27.815	39.954	1.00	11.66
	ATOM	1959	CD1	TRP	310	33.360	28.153	39.266	1.00	9.51
45	ATOM	1960	NE1	TRP	310	33.396	27.550	40.498	1.00	9.82
	ATOM	1961	CZ2	TRP	310	35.243	26.805	42.028	1.00	10.04
	ATOM	1962	CZ3	TRP	310	37.446	27.251	41.106	1.00	12.67
	ATOM	1963	CH2	TRP	310	36.613	26.752	42.129	1.00	12.66
	ATOM	1964	C	TRP	310	35.379	28.245	35.054	1.00	12.14
50	ATOM	1965	O	TRP	310	34.840	29.233	34.544	1.00	10.52
	ATOM	1966	N	ALA	311	36.351	27.554	34.460	1.00	11.25
	ATOM	1967	CA	ALA	311	36.890	27.949	33.166	1.00	11.45
	ATOM	1968	CB	ALA	311	35.817	27.803	32.076	1.00	13.28
	ATOM	1969	C	ALA	311	37.372	29.395	33.240	1.00	11.09
55	ATOM	1970	O	ALA	311	37.296	30.128	32.256	1.00	10.98
	ATOM	1971	N	GLN	312	37.862	29.804	34.410	1.00	11.21
	ATOM	1972	CA	GLN	312	38.346	31.168	34.594	1.00	10.89
	ATOM	1973	CB	GLN	312	38.201	31.603	36.057	1.00	10.80
	ATOM	1974	CG	GLN	312	39.053	30.838	37.052	1.00	11.00
60	ATOM	1975	CD	GLN	312	38.662	31.139	38.488	1.00	12.63
	ATOM	1976	OE1	GLN	312	37.508	30.951	38.876	1.00	10.11

	ATOM	1977	NE2	GLN	312	39.621	31.610	34.283	1.00	12.95
	ATOM	1978	C	GLN	312	39.794	31.302	34.138	1.00	12.02
	ATOM	1979	O	GLN	312	40.249	32.398	33.809	1.00	10.55
	ATOM	1980	N	THR	313	40.510	30.182	34.141	1.00	12.20
5	ATOM	1981	CA	THR	313	41.898	30.117	33.687	1.00	13.97
	ATOM	1982	CB	THR	313	42.914	30.108	34.859	1.00	15.24
	ATOM	1983	OG1	THR	313	42.544	29.117	35.826	1.00	18.23
	ATOM	1984	CG2	THR	313	42.951	31.468	35.527	1.00	19.92
	ATOM	1985	C	THR	313	41.998	28.814	32.903	1.00	12.84
10	ATOM	1986	O	THR	313	41.464	27.790	33.328	1.00	11.11
	ATOM	1987	N	TRP	314	42.660	28.864	31.751	1.00	12.37
	ATOM	1988	CA	TRP	314	42.778	27.696	30.884	1.00	12.96
	ATOM	1989	CB	TRP	314	42.357	28.060	29.464	1.00	12.27
	ATOM	1990	CG	TRP	314	41.057	28.797	29.339	1.00	13.71
15	ATOM	1991	CD2	TRP	314	40.534	29.392	28.145	1.00	13.32
	ATOM	1992	CE2	TRP	314	39.244	29.882	28.450	1.00	13.06
	ATOM	1993	CE3	TRP	314	41.027	29.551	26.844	1.00	12.97
	ATOM	1994	CD1	TRP	314	40.094	28.957	30.299	1.00	12.24
	ATOM	1995	NE1	TRP	314	39.002	29.606	29.772	1.00	12.13
20	ATOM	1996	CZ2	TRP	314	38.442	30.519	27.502	1.00	12.07
	ATOM	1997	CZ3	TRP	314	40.227	30.186	25.899	1.00	14.41
	ATOM	1998	CH2	TRP	314	38.947	30.659	26.236	1.00	13.57
	ATOM	1999	C	TRP	314	44.184	27.111	30.823	1.00	14.49
	ATOM	2000	O	TRP	314	44.492	26.330	29.922	1.00	13.65
25	ATOM	2001	N	SER	315	45.029	27.489	31.775	1.00	15.57
	ATOM	2002	CA	SER	315	46.414	27.021	31.818	1.00	16.96
	ATOM	2003	CB	SER	315	47.093	27.539	33.091	1.00	18.01
	ATOM	2004	OG	SER	315	46.977	28.947	33.186	1.00	26.11
	ATOM	2005	C	SER	315	46.568	25.500	31.768	1.00	15.01
30	ATOM	2006	O	SER	315	47.487	24.980	31.135	1.00	12.81
	ATOM	2007	N	ASN	316	45.663	24.794	32.434	1.00	15.19
	ATOM	2008	CA	ASN	316	45.742	23.345	32.504	1.00	14.93
	ATOM	2009	CB	ASN	316	44.837	22.849	33.632	1.00	16.81
	ATOM	2010	CG	ASN	316	45.348	23.284	35.005	1.00	19.36
35	ATOM	2011	OD1	ASN	316	46.503	23.037	35.345	1.00	20.13
	ATOM	2012	ND2	ASN	316	44.496	23.939	35.787	1.00	17.72
	ATOM	2013	C	ASN	316	45.527	22.542	31.224	1.00	14.44
	ATOM	2014	O	ASN	316	45.772	21.341	31.212	1.00	13.76
	ATOM	2015	N	ILE	317	45.078	23.187	30.152	1.00	12.82
40	ATOM	2016	CA	ILE	317	44.925	22.476	28.883	1.00	13.82
	ATOM	2017	CB	ILE	317	43.533	22.691	28.230	1.00	14.54
	ATOM	2018	CG2	ILE	317	42.447	22.099	29.126	1.00	15.01
	ATOM	2019	CG1	ILE	317	43.301	24.175	27.945	1.00	14.21
	ATOM	2020	CD1	ILE	317	42.110	24.433	27.049	1.00	15.28
45	ATOM	2021	C	ILE	317	46.004	22.933	27.898	1.00	13.81
	ATOM	2022	O	ILE	317	45.836	22.823	26.686	1.00	13.91
	ATOM	2023	N	TYR	318	47.115	23.443	28.429	1.00	14.69
	ATOM	2024	CA	TYR	318	48.228	23.899	27.595	1.00	16.96
	ATOM	2025	CB	TYR	318	49.406	24.338	28.471	1.00	17.55
50	ATOM	2026	CG	TYR	318	50.637	24.733	27.682	1.00	20.39
	ATOM	2027	CD1	TYR	318	50.690	25.942	26.995	1.00	19.75
	ATOM	2028	CE1	TYR	318	51.802	26.290	26.233	1.00	22.32
	ATOM	2029	CD2	TYR	318	51.734	23.875	27.590	1.00	21.99
	ATOM	2030	CE2	TYR	318	52.850	24.212	26.831	1.00	23.31
55	ATOM	2031	CZ	TYR	318	52.878	25.421	26.157	1.00	23.13
	ATOM	2032	OH	TYR	318	53.983	25.764	25.411	1.00	24.51
	ATOM	2033	C	TYR	318	48.691	22.787	26.645	1.00	17.99
	ATOM	2034	O	TYR	318	48.996	23.038	25.480	1.00	17.00
	ATOM	2035	N	ASP	319	48.735	21.561	27.154	1.00	18.60
60	ATOM	2036	CA	ASP	319	49.157	20.403	26.369	1.00	21.85
	ATOM	2037	CB	ASP	319	49.104	19.140	27.232	1.00	24.07

					47.724	18.888	27.8	1.00	29.24
	ATOM	2038	ASP	319	47.207	19.781	28.507	1.00	34.33
	ATOM	2039	OD1 ASP	319	47.149	17.805	27.558	1.00	33.51
	ATOM	2040	OD2 ASP	319	48.298	20.192	25.122	1.00	21.74
	ATOM	2041	C ASP	319	48.768	19.645	24.124	1.00	20.42
5	ATOM	2042	O ASP	319	47.041	20.622	25.180	1.00	19.73
	ATOM	2043	N LEU	320	46.141	20.459	24.045	1.00	19.44
	ATOM	2044	CA LEU	320	44.684	20.371	24.523	1.00	19.37
	ATOM	2045	CB LEU	320	44.255	19.241	25.471	1.00	20.20
	ATOM	2046	CG LEU	320	42.774	19.397	25.798	1.00	19.42
10	ATOM	2047	CD1 LEU	320	44.515	17.888	24.830	1.00	18.15
	ATOM	2048	CD2 LEU	320	46.253	21.588	23.025	1.00	17.85
	ATOM	2049	C LEU	320	45.823	21.434	21.882	1.00	17.25
	ATOM	2050	O LEU	320	46.845	22.711	23.426	1.00	16.88
	ATOM	2051	N VAL	321	46.944	23.864	22.531	1.00	17.25
15	ATOM	2052	CA VAL	321	46.073	25.038	23.063	1.00	15.70
	ATOM	2053	CB VAL	321	44.683	24.538	23.413	1.00	15.29
	ATOM	2054	CG1 VAL	321	46.726	25.665	24.285	1.00	13.63
	ATOM	2055	CG2 VAL	321	48.352	24.407	22.270	1.00	18.75
	ATOM	2056	C VAL	321	48.501	25.476	21.670	1.00	20.66
20	ATOM	2057	O VAL	321	49.379	23.684	22.705	1.00	19.31
	ATOM	2058	N VAL	322	50.752	24.145	22.514	1.00	20.26
	ATOM	2059	CA VAL	322	51.767	23.052	22.933	1.00	22.20
	ATOM	2060	CB VAL	322	51.500	21.770	22.172	1.00	24.86
	ATOM	2061	CG1 VAL	322	53.187	23.540	22.692	1.00	23.70
25	ATOM	2062	CG2 VAL	322	51.029	24.591	21.072	1.00	19.64
	ATOM	2063	C VAL	322	50.878	23.816	20.130	1.00	19.00
	ATOM	2064	O VAL	322	51.426	25.864	20.888	1.00	18.76
	ATOM	2065	N PRO	323	51.505	26.903	21.931	1.00	17.26
	ATOM	2066	CD PRO	323	51.725	26.429	19.566	1.00	19.32
30	ATOM	2067	CA PRO	323	52.142	27.863	19.890	1.00	19.18
	ATOM	2068	CB PRO	323	51.348	28.170	21.135	1.00	17.09
	ATOM	2069	CG PRO	323	52.812	25.665	18.809	1.00	20.64
	ATOM	2070	C PRO	323	52.647	25.336	17.634	1.00	20.49
	ATOM	2071	O PRO	323	53.927	25.398	19.479	1.00	21.43
35	ATOM	2072	N PHE	324	55.019	24.660	18.854	1.00	22.71
	ATOM	2073	CA PHE	324	56.245	25.560	18.668	1.00	22.22
	ATOM	2074	CB PHE	324	55.991	26.751	17.789	1.00	20.95
	ATOM	2075	CG PHE	324	55.631	27.977	18.339	1.00	20.89
	ATOM	2076	CD1 PHE	324	56.088	26.642	16.408	1.00	20.89
40	ATOM	2077	CD2 PHE	324	55.371	29.073	17.526	1.00	21.44
	ATOM	2078	CE1 PHE	324	55.829	27.734	15.586	1.00	20.48
	ATOM	2079	CE2 PHE	324	55.471	28.951	16.144	1.00	20.58
	ATOM	2080	CZ PHE	324	55.376	23.458	19.712	1.00	23.69
	ATOM	2081	C PHE	324	56.267	23.526	20.557	1.00	21.84
45	ATOM	2082	O PHE	324	54.670	22.334	19.505	1.00	26.08
	ATOM	2083	N PRO	325	53.612	22.157	18.495	1.00	26.36
	ATOM	2084	CD PRO	325	54.888	21.091	20.251	1.00	28.73
	ATOM	2085	CA PRO	325	53.790	20.168	19.714	1.00	27.79
	ATOM	2086	CB PRO	325	53.588	20.660	18.319	1.00	27.78
50	ATOM	2087	CG PRO	325	56.290	20.500	20.110	1.00	30.60
	ATOM	2088	C PRO	325	56.732	19.732	20.968	1.00	30.52
	ATOM	2089	O PRO	325	56.991	20.858	19.038	1.00	31.95
	ATOM	2090	N SER	326	58.346	20.356	18.837	1.00	35.76
	ATOM	2091	CA SER	326	58.885	20.786	17.472	1.00	37.39
55	ATOM	2092	CB SER	326	58.203	20.118	16.424	1.00	41.03
	ATOM	2093	OG SER	326	59.261	20.883	19.940	1.00	36.95
	ATOM	2094	C SER	326	60.355	20.363	20.152	1.00	36.99
	ATOM	2095	O SER	326	58.809	21.925	20.631	1.00	37.24
	ATOM	2096	N ALA	327	59.575	22.517	21.720	1.00	38.79
60	ATOM	2097	CA ALA	327	59.564	24.039	21.610	1.00	38.45
	ATOM	2098	CB ALA	327					

	ATOM	2100	C	ALA	327	58.937	22.078	23.033	1.00	40.49
	ATOM	2100	O	ALA	327	58.143	22.811	23.623	1.00	41.01
	ATOM	2101	N	PRO	328	59.283	20.870	23.509	1.00	41.45
	ATOM	2102	CD	PRO	328	60.341	19.988	22.982	1.00	41.86
5	ATOM	2103	CA	PRO	328	58.737	20.330	24.757	1.00	42.79
	ATOM	2104	CB	PRO	328	59.317	18.919	24.799	1.00	42.30
	ATOM	2105	CG	PRO	328	60.663	19.112	24.175	1.00	42.39
	ATOM	2106	C	PRO	328	59.111	21.150	25.989	1.00	42.72
	ATOM	2107	O	PRO	328	60.206	21.712	26.072	1.00	42.49
10	ATOM	2108	N	ALA	329	58.186	21.218	26.939	1.00	42.80
	ATOM	2109	CA	ALA	329	58.410	21.954	28.173	1.00	43.32
	ATOM	2110	CB	ALA	329	57.310	22.996	28.373	1.00	43.71
	ATOM	2111	C	ALA	329	58.419	20.967	29.329	1.00	42.69
	ATOM	2112	O	ALA	329	57.621	20.027	29.359	1.00	41.34
15	ATOM	2113	N	MET	330	59.325	21.173	30.278	1.00	42.76
	ATOM	2114	CA	MET	330	59.417	20.288	31.425	1.00	42.98
	ATOM	2115	CB	MET	330	60.525	20.743	32.372	1.00	44.14
	ATOM	2116	CG	MET	330	61.873	20.155	32.054	1.00	45.52
	ATOM	2117	SD	MET	330	63.030	20.380	33.396	1.00	50.91
20	ATOM	2118	CE	MET	330	62.368	19.255	34.608	1.00	49.99
	ATOM	2119	C	MET	330	58.120	20.194	32.208	1.00	43.28
	ATOM	2120	O	MET	330	57.295	21.109	32.194	1.00	44.37
	ATOM	2121	N	ASP	331	57.951	19.068	32.889	1.00	42.06
	ATOM	2122	CA	ASP	331	56.784	18.835	33.718	1.00	41.71
25	ATOM	2123	CB	ASP	331	56.652	17.339	34.010	1.00	43.19
	ATOM	2124	CG	ASP	331	55.319	16.978	34.623	1.00	44.69
	ATOM	2125	OD1	ASP	331	54.829	17.742	35.482	1.00	45.38
	ATOM	2126	OD2	ASP	331	54.771	15.920	34.252	1.00	46.02
	ATOM	2127	C	ASP	331	57.068	19.606	35.006	1.00	40.79
30	ATOM	2128	O	ASP	331	57.739	19.096	35.907	1.00	39.06
	ATOM	2129	N	THR	332	56.581	20.842	35.077	1.00	39.46
	ATOM	2130	CA	THR	332	56.817	21.678	36.247	1.00	39.60
	ATOM	2131	CB	THR	332	56.132	23.054	36.106	1.00	40.44
	ATOM	2132	OG1	THR	332	56.580	23.698	34.907	1.00	44.22
35	ATOM	2133	CG2	THR	332	56.497	23.963	37.287	1.00	43.44
	ATOM	2134	C	THR	332	56.376	21.042	37.559	1.00	38.30
	ATOM	2135	O	THR	332	57.120	21.075	38.537	1.00	37.12
	ATOM	2136	N	THR	333	55.181	20.457	37.584	1.00	37.24
	ATOM	2137	CA	THR	333	54.694	19.819	38.799	1.00	35.98
40	ATOM	2138	CB	THR	333	53.238	19.345	38.638	1.00	35.93
	ATOM	2139	OG1	THR	333	52.384	20.485	38.467	1.00	35.53
	ATOM	2140	CG2	THR	333	52.798	18.557	39.857	1.00	35.95
	ATOM	2141	C	THR	333	55.584	18.628	39.139	1.00	35.83
	ATOM	2142	O	THR	333	55.983	18.447	40.292	1.00	35.49
45	ATOM	2143	N	ALA	334	55.900	17.818	38.132	1.00	35.47
	ATOM	2144	CA	ALA	334	56.753	16.652	38.338	1.00	34.53
	ATOM	2145	CB	ALA	334	56.918	15.875	37.032	1.00	35.72
	ATOM	2146	C	ALA	334	58.116	17.078	38.869	1.00	33.83
	ATOM	2147	O	ALA	334	58.714	16.387	39.693	1.00	34.31
50	ATOM	2148	N	ALA	335	58.602	18.221	38.391	1.00	32.92
	ATOM	2149	CA	ALA	335	59.897	18.745	38.818	1.00	31.60
	ATOM	2150	CB	ALA	335	60.295	19.935	37.946	1.00	30.64
	ATOM	2151	C	ALA	335	59.867	19.158	40.289	1.00	30.59
	ATOM	2152	O	ALA	335	60.750	18.791	41.056	1.00	29.04
55	ATOM	2153	N	MET	336	58.848	19.919	40.680	1.00	31.65
	ATOM	2154	CA	MET	336	58.720	20.361	42.069	1.00	33.03
	ATOM	2155	CB	MET	336	57.454	21.205	42.242	1.00	31.27
	ATOM	2156	CG	MET	336	57.523	22.564	41.568	1.00	29.31
	ATOM	2157	SD	MET	336	55.990	23.505	41.708	1.00	26.33
60	ATOM	2158	CE	MET	336	56.044	23.993	43.446	1.00	23.57
	ATOM	2159	C	MET	336	58.671	19.158	43.008	1.00	33.75

				59.380	19.104	44.665	1.00	32.69	
				57.828	18.190	42.665	1.00	36.37	
				57.679	16.976	43.457	1.00	38.17	
				56.509	16.148	42.921	1.00	38.76	
				55.116	16.781	43.006	1.00	39.29	
5	ATOM	2160	MET	336	54.152	16.026	42.106	1.00	39.59
	ATOM	2161	N	337	54.630	16.771	44.449	1.00	39.05
	ATOM	2162	CA	337	58.964	16.155	43.403	1.00	39.59
	ATOM	2163	CB	337	59.437	15.656	44.425	1.00	40.32
	ATOM	2164	CG	337	59.524	16.027	42.203	1.00	40.41
	ATOM	2165	CD1	337	60.750	15.267	41.994	1.00	41.35
	ATOM	2166	CD2	337	61.195	15.374	40.538	1.00	41.73
	ATOM	2167	C	337	61.881	15.713	42.912	1.00	41.96
10	ATOM	2168	O	337	62.699	14.895	43.332	1.00	42.58
	ATOM	2169	N	338	61.942	17.006	43.219	1.00	41.77
	ATOM	2170	CA	338	63.000	17.490	44.094	1.00	40.98
	ATOM	2171	CB	338	63.871	18.519	43.369	1.00	42.73
	ATOM	2172	C	338	63.134	19.520	42.516	1.00	44.71
	ATOM	2173	O	338	64.047	20.143	41.476	1.00	45.98
15	ATOM	2174	N	339	65.096	20.697	41.806	1.00	46.01
	ATOM	2175	CA	339	63.656	20.046	40.210	1.00	46.19
	ATOM	2176	CB	339	62.518	18.029	45.434	1.00	39.28
	ATOM	2177	CG	339	62.990	19.054	45.923	1.00	39.85
	ATOM	2178	CD	339	61.567	17.305	46.014	1.00	38.07
20	ATOM	2179	OE1	339	61.023	17.625	47.322	1.00	35.18
	ATOM	2180	NE2	339	60.537	19.011	47.696	1.00	33.08
	ATOM	2181	C	339	60.742	19.433	48.834	1.00	32.07
25	ATOM	2182	O	340	59.905	19.731	46.775	1.00	31.21
	ATOM	2183	N	340	59.390	21.049	47.128	1.00	30.14
	ATOM	2184	CA	340	58.899	21.808	45.887	1.00	29.67
	ATOM	2185	C	340	59.982	22.541	45.158	1.00	29.21
	ATOM	2186	O	340	60.033	23.948	44.884	1.00	30.13
30	ATOM	2187	N	341	61.235	24.193	44.182	1.00	30.52
	ATOM	2188	CA	341	59.181	25.025	45.163	1.00	29.73
	ATOM	2189	CB	341	61.119	22.007	44.627	1.00	29.98
	ATOM	2190	CG	341	61.877	22.992	44.039	1.00	29.90
	ATOM	2191	CD2	341	61.608	25.474	43.754	1.00	29.27
	ATOM	2192	CE2	341	59.551	26.298	44.738	1.00	30.55
	ATOM	2193	CE3	341	60.757	26.509	44.039	1.00	30.31
35	ATOM	2194	CD1	341	58.225	20.821	48.085	1.00	28.38
	ATOM	2195	NE1	341	57.478	19.857	47.936	1.00	27.83
	ATOM	2196	CZ2	341	58.086	21.695	49.075	1.00	27.38
	ATOM	2197	CZ3	341	57.001	21.583	50.045	1.00	26.99
40	ATOM	2198	CH2	341	57.527	21.284	51.463	1.00	26.84
	ATOM	2199	C	341	58.278	22.410	51.937	1.00	25.96
	ATOM	2200	O	341	58.416	20.046	51.458	1.00	27.25
	ATOM	2201	N	342	56.277	22.918	50.107	1.00	26.48
	ATOM	2202	CA	342	56.784	23.926	49.622	1.00	25.97
45	ATOM	2203	CB	342	55.075	22.942	50.702	1.00	25.99
	ATOM	2204	OG1	342	54.229	21.824	51.158	1.00	24.91
	ATOM	2205	CG2	342	54.352	24.211	50.787	1.00	25.66
	ATOM	2206	C	342	53.128	23.846	51.620	1.00	24.24
	ATOM	2207	O	342	52.849	22.444	51.163	1.00	23.75
	ATOM	2208	N	343	55.214	25.287	51.446	1.00	25.07
50	ATOM	2209	CD	343	55.196	26.446	51.036	1.00	24.95
	ATOM	2210	CA	343	55.981	24.897	52.460	1.00	25.30
	ATOM	2211	CB	343	56.836	25.846	53.160	1.00	26.37
	ATOM	2212	CG	343	57.483	25.189	54.383	1.00	29.20
	ATOM	2213	C	343	57.856	26.180	55.485	1.00	34.03
55	ATOM	2214	O	343	58.585	25.495	56.634	1.00	38.59
	ATOM	2215	N	344	58.774	26.369	57.794	1.00	42.13
	ATOM	2216	CA	344					
	ATOM	2217	CB	344					
	ATOM	2218	CG	344					
60	ATOM	2219	CD	344					
	ATOM	2220	NE	344					

	ATOM	2222	CZ	ARG	344	57.793	26.785	58.593	1.00	43.28
	ATOM	2222	NH1	ARG	344	56.535	26.416	58.364	1.00	44.54
	ATOM	2223	NH2	ARG	344	58.070	27.563	59.631	1.00	42.82
	ATOM	2224	C	ARG	344	57.914	26.395	52.227	1.00	26.08
5	ATOM	2225	O	ARG	344	58.199	27.590	52.243	1.00	24.97
	ATOM	2226	N	ARG	345	58.509	25.521	51.416	1.00	26.26
	ATOM	2227	CA	ARG	345	59.542	25.944	50.468	1.00	26.55
	ATOM	2228	CB	ARG	345	59.986	24.772	49.584	1.00	28.67
	ATOM	2229	CG	ARG	345	61.485	24.491	49.595	1.00	35.65
10	ATOM	2230	CD	ARG	345	62.322	25.714	49.229	1.00	39.10
	ATOM	2231	NE	ARG	345	62.669	25.799	47.808	1.00	43.47
	ATOM	2232	CZ	ARG	345	63.388	24.894	47.149	1.00	43.78
	ATOM	2233	NH1	ARG	345	63.840	23.814	47.771	1.00	45.20
	ATOM	2234	NH2	ARG	345	63.681	25.079	45.870	1.00	45.37
15	ATOM	2235	C	ARG	345	58.948	27.020	49.573	1.00	24.15
	ATOM	2236	O	ARG	345	59.558	28.063	49.330	1.00	23.46
	ATOM	2237	N	MET	346	57.746	26.736	49.084	1.00	22.01
	ATOM	2238	CA	MET	346	57.024	27.634	48.199	1.00	21.13
	ATOM	2239	CB	MET	346	55.660	27.023	47.864	1.00	22.10
20	ATOM	2240	CG	MET	346	55.773	25.773	46.989	1.00	20.75
	ATOM	2241	SD	MET	346	54.316	24.724	47.003	1.00	22.63
	ATOM	2242	CE	MET	346	53.205	25.656	45.917	1.00	19.78
	ATOM	2243	C	MET	346	56.869	29.039	48.775	1.00	19.41
	ATOM	2244	O	MET	346	57.169	30.018	48.098	1.00	20.08
25	ATOM	2245	N	PHE	347	56.418	29.148	50.021	1.00	18.55
	ATOM	2246	CA	PHE	347	56.260	30.469	50.621	1.00	19.25
	ATOM	2247	CB	PHE	347	55.388	30.400	51.879	1.00	17.54
	ATOM	2248	CG	PHE	347	53.931	30.168	51.587	1.00	16.26
	ATOM	2249	CD1	PHE	347	53.434	28.882	51.430	1.00	14.65
30	ATOM	2250	CD2	PHE	347	53.064	31.244	51.421	1.00	16.74
	ATOM	2251	CE1	PHE	347	52.091	28.669	51.109	1.00	17.04
	ATOM	2252	CE2	PHE	347	51.721	31.041	51.100	1.00	15.45
	ATOM	2253	CZ	PHE	347	51.236	29.754	50.942	1.00	13.62
	ATOM	2254	C	PHE	347	57.607	31.109	50.938	1.00	19.50
35	ATOM	2255	O	PHE	347	57.733	32.334	50.931	1.00	19.74
	ATOM	2256	N	LYS	348	58.612	30.281	51.212	1.00	19.37
	ATOM	2257	CA	LYS	348	59.949	30.789	51.499	1.00	20.13
	ATOM	2258	CB	LYS	348	60.871	29.653	51.964	1.00	23.49
	ATOM	2259	CG	LYS	348	60.647	29.188	53.404	1.00	26.94
40	ATOM	2260	CD	LYS	348	61.173	30.215	54.405	1.00	30.04
	ATOM	2261	CE	LYS	348	61.057	29.722	55.840	1.00	30.37
	ATOM	2262	NZ	LYS	348	61.712	30.663	56.797	1.00	32.04
	ATOM	2263	C	LYS	348	60.517	31.434	50.234	1.00	19.83
	ATOM	2264	O	LYS	348	61.180	32.466	50.303	1.00	18.66
45	ATOM	2265	N	GLU	349	60.263	30.823	49.077	1.00	19.90
	ATOM	2266	CA	GLU	349	60.746	31.383	47.817	1.00	19.84
	ATOM	2267	CB	GLU	349	60.449	30.444	46.644	1.00	22.36
	ATOM	2268	CG	GLU	349	61.320	29.196	46.568	1.00	26.40
	ATOM	2269	CD	GLU	349	62.807	29.505	46.643	1.00	29.00
50	ATOM	2270	OE1	GLU	349	63.241	30.541	46.083	1.00	29.80
	ATOM	2271	OE2	GLU	349	63.543	28.701	47.253	1.00	30.47
	ATOM	2272	C	GLU	349	60.074	32.730	47.565	1.00	19.20
	ATOM	2273	O	GLU	349	60.723	33.688	47.140	1.00	19.59
	ATOM	2274	N	ALA	350	58.770	32.798	47.820	1.00	18.23
55	ATOM	2275	CA	ALA	350	58.016	34.035	47.633	1.00	17.72
	ATOM	2276	CB	ALA	350	56.529	33.796	47.903	1.00	17.17
	ATOM	2277	C	ALA	350	58.556	35.102	48.582	1.00	18.51
	ATOM	2278	O	ALA	350	58.763	36.249	48.189	1.00	18.51
	ATOM	2279	N	ASP	351	58.790	34.718	49.835	1.00	17.68
60	ATOM	2280	CA	ASP	351	59.316	35.653	50.823	1.00	17.98
	ATOM	2281	CB	ASP	351	59.481	34.950	52.179	1.00	18.35

	ATOM	2282	ASP	351	59.841	35.912	53.542	1.00	21.38
	ATOM	2283	OD1 ASP	351	59.094	36.886	53.542	1.00	21.06
	ATOM	2284	OD2 ASP	351	60.871	35.688	53.972	1.00	23.40
	ATOM	2285	C ASP	351	60.658	36.193	50.322	1.00	17.98
5	ATOM	2286	O ASP	351	60.945	37.386	50.449	1.00	16.96
	ATOM	2287	N ASP	352	61.468	35.312	49.733	1.00	17.61
	ATOM	2288	CA ASP	352	62.776	35.702	49.207	1.00	17.44
	ATOM	2289	CB ASP	352	63.544	34.464	48.718	1.00	16.88
	ATOM	2290	CG ASP	352	64.886	34.819	48.100	1.00	20.01
10	ATOM	2291	OD1 ASP	352	64.986	34.843	46.857	1.00	20.73
	ATOM	2292	OD2 ASP	352	65.842	35.089	48.858	1.00	22.68
	ATOM	2293	C ASP	352	62.668	36.724	48.074	1.00	16.59
	ATOM	2294	O ASP	352	63.456	37.665	48.001	1.00	16.83
	ATOM	2295	N PHE	353	61.687	36.546	47.196	1.00	16.60
15	ATOM	2296	CA PHE	353	61.516	37.481	46.094	1.00	15.67
	ATOM	2297	CB PHE	353	60.393	37.022	45.151	1.00	15.02
	ATOM	2298	CG PHE	353	60.498	37.599	43.760	1.00	13.85
	ATOM	2299	CD1 PHE	353	60.633	36.766	42.655	1.00	15.98
	ATOM	2300	CD2 PHE	353	60.491	38.977	43.558	1.00	14.55
20	ATOM	2301	CE1 PHE	353	60.763	37.292	41.363	1.00	13.57
	ATOM	2302	CE2 PHE	353	60.622	39.515	42.272	1.00	15.24
	ATOM	2303	CZ PHE	353	60.759	38.668	41.173	1.00	14.14
	ATOM	2304	C PHE	353	61.212	38.874	46.647	1.00	14.39
	ATOM	2305	O PHE	353	61.808	39.863	46.212	1.00	15.75
25	ATOM	2306	N PHE	354	60.301	38.964	47.612	1.00	14.89
	ATOM	2307	CA PHE	354	59.980	40.269	48.191	1.00	15.05
	ATOM	2308	CB PHE	354	58.864	40.149	49.238	1.00	14.19
	ATOM	2309	CG PHE	354	57.481	40.060	48.645	1.00	14.57
	ATOM	2310	CD1 PHE	354	56.876	38.824	48.428	1.00	13.09
30	ATOM	2311	CD2 PHE	354	56.797	41.217	48.275	1.00	14.46
	ATOM	2312	CE1 PHE	354	55.613	38.738	47.852	1.00	12.80
	ATOM	2313	CE2 PHE	354	55.528	41.144	47.695	1.00	14.78
	ATOM	2314	CZ PHE	354	54.935	39.901	47.484	1.00	14.26
	ATOM	2315	C PHE	354	61.203	40.959	48.811	1.00	15.63
35	ATOM	2316	O PHE	354	61.448	42.141	48.555	1.00	16.90
	ATOM	2317	N THR	355	61.973	40.233	49.620	1.00	17.16
	ATOM	2318	CA THR	355	63.155	40.824	50.243	1.00	17.44
	ATOM	2319	CB THR	355	63.798	39.887	51.306	1.00	19.33
	ATOM	2320	OG1 THR	355	64.122	38.624	50.713	1.00	22.32
40	ATOM	2321	CG2 THR	355	62.845	39.675	52.476	1.00	19.21
	ATOM	2322	C THR	355	64.207	41.179	49.202	1.00	16.79
	ATOM	2323	O THR	355	64.968	42.130	49.387	1.00	17.18
	ATOM	2324	N SER	356	64.242	40.429	48.102	1.00	16.97
	ATOM	2325	CA SER	356	65.215	40.702	47.045	1.00	16.07
45	ATOM	2326	CB SER	356	65.127	39.651	45.930	1.00	17.08
	ATOM	2327	OG SER	356	64.105	39.961	44.991	1.00	20.08
	ATOM	2328	C SER	356	64.942	42.087	46.471	1.00	17.25
	ATOM	2329	O SER	356	65.856	42.767	46.005	1.00	16.33
	ATOM	2330	N LEU	357	63.677	42.503	46.514	1.00	16.63
50	ATOM	2331	CA LEU	357	63.282	43.817	46.013	1.00	17.17
	ATOM	2332	CB LEU	357	61.804	43.821	45.607	1.00	16.38
	ATOM	2333	CG LEU	357	61.378	42.907	44.458	1.00	16.10
	ATOM	2334	CD1 LEU	357	59.897	43.117	44.185	1.00	16.24
	ATOM	2335	CD2 LEU	357	62.202	43.212	43.211	1.00	13.65
55	ATOM	2336	C LEU	357	63.496	44.875	47.087	1.00	16.00
	ATOM	2337	O LEU	357	63.228	46.057	46.872	1.00	16.89
	ATOM	2338	N GLY	358	63.978	44.445	48.246	1.00	15.89
	ATOM	2339	CA GLY	358	64.193	45.378	49.333	1.00	16.90
	ATOM	2340	C GLY	358	62.928	45.537	50.163	1.00	18.34
60	ATOM	2341	O GLY	358	62.866	46.386	51.054	1.00	19.04
	ATOM	2342	N LEU	359	61.914	44.724	49.873	1.00	16.43

	ATOM	2343	CA	LEU	359	60.663	44.790	61.618	1.00	17.52
	ATOM	2344	CB	LEU	359	59.510	44.258	49.757	1.00	13.59
	ATOM	2345	CG	LEU	359	59.299	45.099	48.487	1.00	14.94
	ATOM	2346	CD1	LEU	359	58.221	44.490	47.588	1.00	12.02
5	ATOM	2347	CD2	LEU	359	58.928	46.518	48.893	1.00	13.39
	ATOM	2348	C	LEU	359	60.786	44.014	51.938	1.00	18.75
	ATOM	2349	O	LEU	359	61.807	43.369	52.194	1.00	18.11
	ATOM	2350	N	LEU	360	59.744	44.078	52.763	1.00	17.60
	ATOM	2351	CA	LEU	360	59.741	43.432	54.075	1.00	17.15
10	ATOM	2352	CB	LEU	360	58.661	44.064	54.958	1.00	16.43
	ATOM	2353	CG	LEU	360	58.719	45.578	55.171	1.00	18.94
	ATOM	2354	CD1	LEU	360	57.401	46.059	55.780	1.00	18.12
	ATOM	2355	CD2	LEU	360	59.911	45.924	56.064	1.00	17.34
	ATOM	2356	C	LEU	360	59.546	41.925	54.109	1.00	18.61
15	ATOM	2357	O	LEU	360	58.764	41.364	53.342	1.00	19.09
	ATOM	2358	N	PRO	361	60.271	41.244	55.011	1.00	19.60
	ATOM	2359	CD	PRO	361	61.405	41.728	55.824	1.00	19.10
	ATOM	2360	CA	PRO	361	60.130	39.795	55.121	1.00	19.12
	ATOM	2361	CB	PRO	361	61.461	39.368	55.730	1.00	20.18
20	ATOM	2362	CG	PRO	361	61.770	40.500	56.650	1.00	19.74
	ATOM	2363	C	PRO	361	58.960	39.548	56.065	1.00	19.48
	ATOM	2364	O	PRO	361	58.636	40.407	56.887	1.00	21.65
	ATOM	2365	N	VAL	362	58.305	38.404	55.945	1.00	20.31
	ATOM	2366	CA	VAL	362	57.202	38.123	56.855	1.00	21.83
25	ATOM	2367	CB	VAL	362	56.383	36.900	56.400	1.00	20.89
	ATOM	2368	CG1	VAL	362	55.737	37.189	55.052	1.00	19.57
	ATOM	2369	CG2	VAL	362	57.278	35.670	56.325	1.00	19.33
	ATOM	2370	C	VAL	362	57.828	37.846	58.217	1.00	23.46
	ATOM	2371	O	VAL	362	58.916	37.271	58.298	1.00	22.63
30	ATOM	2372	N	PRO	363	57.157	38.266	59.305	1.00	23.58
	ATOM	2373	CD	PRO	363	55.924	39.073	59.315	1.00	23.83
	ATOM	2374	CA	PRO	363	57.652	38.066	60.672	1.00	23.23
	ATOM	2375	CB	PRO	363	56.602	38.777	61.529	1.00	23.92
	ATOM	2376	CG	PRO	363	56.060	39.835	60.608	1.00	23.78
35	ATOM	2377	C	PRO	363	57.778	36.597	61.049	1.00	22.63
	ATOM	2378	O	PRO	363	57.080	35.741	60.502	1.00	23.59
	ATOM	2379	N	PRO	364	58.684	36.285	61.987	1.00	23.85
	ATOM	2380	CD	PRO	364	59.645	37.186	62.654	1.00	23.46
	ATOM	2381	CA	PRO	364	58.872	34.897	62.422	1.00	21.89
40	ATOM	2382	CB	PRO	364	59.831	35.039	63.603	1.00	23.26
	ATOM	2383	CG	PRO	364	60.673	36.218	63.203	1.00	24.65
	ATOM	2384	C	PRO	364	57.533	34.289	62.837	1.00	21.17
	ATOM	2385	O	PRO	364	57.256	33.119	62.570	1.00	20.23
	ATOM	2386	N	GLU	365	56.704	35.105	63.484	1.00	21.36
45	ATOM	2387	CA	GLU	365	55.388	34.681	63.957	1.00	22.68
	ATOM	2388	CB	GLU	365	54.691	35.860	64.644	1.00	25.18
	ATOM	2389	CG	GLU	365	53.265	35.599	65.084	1.00	27.55
	ATOM	2390	CD	GLU	365	52.726	36.694	65.995	1.00	30.30
	ATOM	2391	OE1	GLU	365	53.118	37.871	65.821	1.00	29.38
50	ATOM	2392	OE2	GLU	365	51.898	36.378	66.876	1.00	30.66
	ATOM	2393	C	GLU	365	54.511	34.131	62.832	1.00	23.65
	ATOM	2394	O	GLU	365	53.640	33.286	63.068	1.00	24.23
	ATOM	2395	N	PHE	366	54.752	34.611	61.612	1.00	22.72
	ATOM	2396	CA	PHE	366	54.007	34.179	60.428	1.00	20.44
55	ATOM	2397	CB	PHE	366	54.516	34.930	59.191	1.00	20.08
	ATOM	2398	CG	PHE	366	53.982	34.397	57.880	1.00	19.61
	ATOM	2399	CD1	PHE	366	52.811	34.911	57.326	1.00	19.02
	ATOM	2400	CD2	PHE	366	54.665	33.395	57.192	1.00	18.91
	ATOM	2401	CE1	PHE	366	52.327	34.438	56.106	1.00	17.67
60	ATOM	2402	CE2	PHE	366	54.191	32.913	55.968	1.00	19.81
	ATOM	2403	CZ	PHE	366	53.020	33.436	55.424	1.00	18.45

	ATOM	2404	PHE	366	54.161	32.681	60.1	1.00	20.36
	ATOM	2405	O	366	53.182	31.968	59.962	1.00	20.59
	ATOM	2406	N	367	55.398	32.207	60.252	1.00	21.17
	ATOM	2407	CA	367	55.680	30.792	60.033	1.00	23.44
5	ATOM	2408	CB	367	57.193	30.571	59.936	1.00	23.71
	ATOM	2409	CG	367	57.837	31.400	58.866	1.00	23.03
	ATOM	2410	CD2	367	57.716	31.214	57.450	1.00	21.94
	ATOM	2411	CE2	367	58.454	32.244	56.828	1.00	20.04
	ATOM	2412	CE3	367	57.053	30.276	56.646	1.00	21.24
10	ATOM	2413	CD1	367	58.620	32.503	59.041	1.00	22.06
	ATOM	2414	NE1	367	58.995	33.017	57.822	1.00	22.15
	ATOM	2415	CZ2	367	58.552	32.364	55.437	1.00	21.91
	ATOM	2416	CZ3	367	57.149	30.394	55.260	1.00	22.47
	ATOM	2417	CH2	367	57.894	31.434	54.672	1.00	21.53
15	ATOM	2418	C	367	55.096	29.898	61.124	1.00	25.38
	ATOM	2419	O	367	54.753	28.741	60.877	1.00	26.15
	ATOM	2420	N	368	54.965	30.445	62.325	1.00	26.99
	ATOM	2421	CA	368	54.439	29.683	63.446	1.00	29.40
	ATOM	2422	CB	368	54.971	30.277	64.754	1.00	32.59
20	ATOM	2423	CG	368	54.447	29.558	65.979	1.00	36.43
	ATOM	2424	OD1	368	53.351	29.842	66.458	1.00	38.69
	ATOM	2425	ND2	368	55.229	28.610	66.489	1.00	39.13
	ATOM	2426	C	368	52.911	29.593	63.493	1.00	29.33
	ATOM	2427	O	368	52.361	28.559	63.878	1.00	28.62
25	ATOM	2428	N	369	52.224	30.655	63.082	1.00	27.34
	ATOM	2429	CA	369	50.766	30.664	63.134	1.00	26.72
	ATOM	2430	CB	369	50.286	31.988	63.734	1.00	28.17
	ATOM	2431	CG	369	50.778	32.222	65.163	1.00	30.11
	ATOM	2432	CD	369	50.173	33.486	65.756	1.00	33.96
30	ATOM	2433	CE	369	50.598	33.679	67.206	1.00	36.40
	ATOM	2434	NZ	369	49.966	34.897	67.802	1.00	39.20
	ATOM	2435	C	369	50.013	30.392	61.833	1.00	26.02
	ATOM	2436	O	369	48.821	30.084	61.864	1.00	25.69
	ATOM	2437	N	370	50.689	30.503	60.696	1.00	23.45
35	ATOM	2438	CA	370	50.021	30.262	59.421	1.00	23.37
	ATOM	2439	CB	370	50.897	30.732	58.249	1.00	21.85
	ATOM	2440	OG	370	51.005	32.143	58.202	1.00	19.18
	ATOM	2441	C	370	49.668	28.792	59.214	1.00	23.22
	ATOM	2442	O	370	50.301	27.901	59.777	1.00	23.81
40	ATOM	2443	N	371	48.639	28.549	58.411	1.00	23.49
	ATOM	2444	CA	371	48.224	27.193	58.083	1.00	24.10
	ATOM	2445	CB	371	46.730	26.991	58.349	1.00	23.79
	ATOM	2446	CG	371	46.260	25.564	58.100	1.00	23.95
	ATOM	2447	SD	371	44.475	25.392	57.941	1.00	26.45
45	ATOM	2448	CE	371	44.296	25.509	56.167	1.00	26.30
	ATOM	2449	C	371	48.506	27.061	56.588	1.00	24.40
	ATOM	2450	O	371	47.671	27.417	55.755	1.00	24.50
	ATOM	2451	N	372	49.691	26.559	56.257	1.00	25.00
	ATOM	2452	CA	372	50.099	26.409	54.865	1.00	25.46
50	ATOM	2453	CB	372	51.599	26.684	54.743	1.00	23.72
	ATOM	2454	CG	372	52.070	27.996	55.382	1.00	24.19
	ATOM	2455	CD1	372	53.581	28.097	55.296	1.00	23.40
	ATOM	2456	CD2	372	51.408	29.184	54.688	1.00	22.75
	ATOM	2457	C	372	49.770	25.044	54.267	1.00	26.72
55	ATOM	2458	O	372	49.995	24.815	53.080	1.00	27.70
	ATOM	2459	N	373	49.238	24.141	55.086	1.00	27.93
	ATOM	2460	CA	373	48.879	22.803	54.620	1.00	29.95
	ATOM	2461	CB	373	49.850	21.750	55.164	1.00	32.89
	ATOM	2462	CG	373	51.281	21.859	54.689	1.00	38.75
60	ATOM	2463	CD	373	52.099	20.640	55.086	1.00	42.30
	ATOM	2464	OE1	373	52.259	20.397	56.302	1.00	44.27

	ATOM	2465	OE2	GLU	373	52.573	19.918	55.181	1.00	43.48
	ATOM	2466	C	GLU	373	47.483	22.425	55.084	1.00	29.73
	ATOM	2467	O	GLU	373	47.011	22.899	56.115	1.00	30.00
	ATOM	2468	N	LYS	374	46.824	21.562	54.324	1.00	29.28
5	ATOM	2469	CA	LYS	374	45.497	21.107	54.699	1.00	30.95
	ATOM	2470	CB	LYS	374	44.889	20.253	53.586	1.00	31.28
	ATOM	2471	CG	LYS	374	43.444	19.847	53.822	1.00	31.52
	ATOM	2472	CD	LYS	374	42.926	19.049	52.631	1.00	33.34
	ATOM	2473	CE	LYS	374	41.415	19.128	52.514	1.00	33.68
10	ATOM	2474	NZ	LYS	374	40.933	18.533	51.235	1.00	33.80
	ATOM	2475	C	LYS	374	45.697	20.256	55.944	1.00	32.17
	ATOM	2476	O	LYS	374	46.520	19.342	55.948	1.00	32.16
	ATOM	2477	N	PRO	375	44.975	20.567	57.030	1.00	33.39
	ATOM	2478	CD	PRO	375	44.183	21.784	57.276	1.00	33.07
15	ATOM	2479	CA	PRO	375	45.120	19.785	58.261	1.00	34.99
	ATOM	2480	CB	PRO	375	44.196	20.512	59.236	1.00	34.90
	ATOM	2481	CG	PRO	375	44.299	21.933	58.777	1.00	33.52
	ATOM	2482	C	PRO	375	44.724	18.323	58.064	1.00	35.62
	ATOM	2483	O	PRO	375	43.812	18.013	57.296	1.00	34.22
20	ATOM	2484	N	THR	376	45.421	17.428	58.755	1.00	37.71
	ATOM	2485	CA	THR	376	45.138	16.000	58.665	1.00	39.65
	ATOM	2486	CB	THR	376	46.308	15.233	58.009	1.00	39.07
	ATOM	2487	OG1	THR	376	47.491	15.390	58.804	1.00	38.66
	ATOM	2488	CG2	THR	376	46.575	15.762	56.608	1.00	39.31
25	ATOM	2489	C	THR	376	44.906	15.439	60.063	1.00	41.67
	ATOM	2490	O	THR	376	45.345	14.333	60.379	1.00	42.78
	ATOM	2491	N	ASP	377	44.221	16.211	60.900	1.00	42.52
	ATOM	2492	CA	ASP	377	43.946	15.781	62.264	1.00	43.25
	ATOM	2493	CB	ASP	377	44.579	16.748	63.272	1.00	44.11
30	ATOM	2494	CG	ASP	377	44.103	18.181	63.093	1.00	44.64
	ATOM	2495	OD1	ASP	377	42.879	18.394	62.984	1.00	43.68
	ATOM	2496	OD2	ASP	377	44.955	19.095	63.072	1.00	44.31
	ATOM	2497	C	ASP	377	42.455	15.649	62.549	1.00	43.56
	ATOM	2498	O	ASP	377	42.031	15.714	63.703	1.00	43.97
35	ATOM	2499	N	GLY	378	41.664	15.473	61.496	1.00	43.76
	ATOM	2500	CA	GLY	378	40.234	15.313	61.674	1.00	45.10
	ATOM	2501	C	GLY	378	39.389	16.574	61.613	1.00	45.20
	ATOM	2502	O	GLY	378	38.160	16.480	61.553	1.00	46.83
	ATOM	2503	N	ARG	379	40.018	17.747	61.629	1.00	43.58
40	ATOM	2504	CA	ARG	379	39.248	18.985	61.569	1.00	41.75
	ATOM	2505	CB	ARG	379	39.902	20.086	62.417	1.00	41.40
	ATOM	2506	CG	ARG	379	41.307	20.489	62.025	1.00	41.01
	ATOM	2507	CD	ARG	379	41.892	21.409	63.091	1.00	40.32
	ATOM	2508	NE	ARG	379	43.352	21.472	63.049	1.00	42.06
45	ATOM	2509	CZ	ARG	379	44.051	22.421	62.435	1.00	42.42
	ATOM	2510	NH1	ARG	379	43.431	23.409	61.801	1.00	42.84
	ATOM	2511	NH2	ARG	379	45.376	22.384	62.456	1.00	42.41
	ATOM	2512	C	ARG	379	39.017	19.488	60.150	1.00	39.88
	ATOM	2513	O	ARG	379	39.884	19.385	59.284	1.00	39.95
50	ATOM	2514	N	GLU	380	37.819	20.015	59.927	1.00	37.75
	ATOM	2515	CA	GLU	380	37.424	20.552	58.635	1.00	35.59
	ATOM	2516	CB	GLU	380	35.913	20.375	58.456	1.00	38.09
	ATOM	2517	CG	GLU	380	35.383	20.691	57.068	1.00	42.10
	ATOM	2518	CD	GLU	380	34.658	19.508	56.444	1.00	43.64
55	ATOM	2519	OE1	GLU	380	33.789	18.911	57.120	1.00	45.08
	ATOM	2520	OE2	GLU	380	34.951	19.179	55.277	1.00	43.23
	ATOM	2521	C	GLU	380	37.793	22.034	58.633	1.00	31.78
	ATOM	2522	O	GLU	380	37.679	22.705	59.659	1.00	28.75
	ATOM	2523	N	VAL	381	38.241	22.545	57.492	1.00	29.15
60	ATOM	2524	CA	VAL	381	38.630	23.950	57.404	1.00	26.32
	ATOM	2525	CB	VAL	381	40.169	24.112	57.499	1.00	24.57

	ATOM	2526	VAL	381	40.705	23.390	58.777	1.00	25.23
	ATOM	2527	CG2 VAL	381	40.824	23.560	56.247	1.00	25.89
	ATOM	2528	C VAL	381	38.185	24.577	56.090	1.00	24.82
	ATOM	2529	O VAL	381	37.661	23.896	55.208	1.00	24.94
5	ATOM	2530	N VAL	382	38.383	25.887	55.975	1.00	23.19
	ATOM	2531	CA VAL	382	38.070	26.602	54.744	1.00	21.67
	ATOM	2532	CB VAL	382	37.674	28.073	54.999	1.00	21.80
	ATOM	2533	CG1 VAL	382	37.563	28.811	53.674	1.00	20.55
	ATOM	2534	CG2 VAL	382	36.348	28.145	55.744	1.00	21.77
10	ATOM	2535	C VAL	382	39.401	26.582	54.006	1.00	21.54
	ATOM	2536	O VAL	382	40.341	27.267	54.402	1.00	20.36
	ATOM	2537	N CYS	383	39.492	25.779	52.953	1.00	21.15
	ATOM	2538	CA CYS	383	40.734	25.676	52.203	1.00	21.33
	ATOM	2539	C CYS	383	41.071	26.872	51.324	1.00	20.79
15	ATOM	2540	O CYS	383	42.241	27.238	51.206	1.00	21.41
	ATOM	2541	CB CYS	383	40.730	24.407	51.351	1.00	21.86
	ATOM	2542	SG CYS	383	41.329	22.923	52.225	1.00	23.08
	ATOM	2543	N HIS	384	40.055	27.482	50.716	1.00	19.24
	ATOM	2544	CA HIS	384	40.269	28.628	49.829	1.00	17.16
20	ATOM	2545	CB HIS	384	38.957	29.376	49.584	1.00	13.14
	ATOM	2546	CG HIS	384	39.027	30.345	48.447	1.00	13.04
	ATOM	2547	CD2 HIS	384	39.476	31.621	48.390	1.00	11.87
	ATOM	2548	ND1 HIS	384	38.665	30.009	47.159	1.00	12.76
	ATOM	2549	CE1 HIS	384	38.888	31.036	46.360	1.00	14.29
25	ATOM	2550	NE2 HIS	384	39.381	32.028	47.081	1.00	15.54
	ATOM	2551	C HIS	384	41.307	29.602	50.388	1.00	17.15
	ATOM	2552	O HIS	384	41.058	30.293	51.375	1.00	18.56
	ATOM	2553	N ALA	385	42.465	29.653	49.738	1.00	15.37
	ATOM	2554	CA ALA	385	43.573	30.514	50.152	1.00	15.12
30	ATOM	2555	CB ALA	385	44.663	30.492	49.081	1.00	12.93
	ATOM	2556	C ALA	385	43.216	31.965	50.478	1.00	13.38
	ATOM	2557	O ALA	385	42.495	32.626	49.733	1.00	13.27
	ATOM	2558	N SER	386	43.739	32.456	51.596	1.00	12.79
	ATOM	2559	CA SER	386	43.508	33.837	52.003	1.00	13.42
35	ATOM	2560	CB SER	386	42.123	33.988	52.651	1.00	12.99
	ATOM	2561	OG SER	386	41.970	33.130	53.765	1.00	14.28
	ATOM	2562	C SER	386	44.602	34.324	52.954	1.00	13.14
	ATOM	2563	O SER	386	45.263	33.525	53.629	1.00	12.93
	ATOM	2564	N ALA	387	44.800	35.640	52.979	1.00	13.15
40	ATOM	2565	CA ALA	387	45.803	36.280	53.825	1.00	13.29
	ATOM	2566	CB ALA	387	46.653	37.239	53.003	1.00	13.06
	ATOM	2567	C ALA	387	45.064	37.033	54.920	1.00	14.39
	ATOM	2568	O ALA	387	44.017	37.637	54.672	1.00	15.15
	ATOM	2569	N TRP	388	45.621	37.014	56.124	1.00	14.45
45	ATOM	2570	CA TRP	388	44.981	37.641	57.272	1.00	15.44
	ATOM	2571	CB TRP	388	44.559	36.547	58.263	1.00	15.81
	ATOM	2572	CG TRP	388	43.575	35.556	57.707	1.00	15.75
	ATOM	2573	CD2 TRP	388	42.297	35.219	58.261	1.00	17.72
	ATOM	2574	CE2 TRP	388	41.716	34.241	57.416	1.00	17.38
50	ATOM	2575	CE3 TRP	388	41.584	35.649	59.391	1.00	18.07
	ATOM	2576	CD1 TRP	388	43.717	34.789	56.581	1.00	16.55
	ATOM	2577	NE1 TRP	388	42.602	33.997	56.400	1.00	15.73
	ATOM	2578	CZ2 TRP	388	40.454	33.687	57.668	1.00	18.71
	ATOM	2579	CZ3 TRP	388	40.327	35.095	59.642	1.00	19.40
55	ATOM	2580	CH2 TRP	388	39.777	34.125	58.782	1.00	18.61
	ATOM	2581	C TRP	388	45.805	38.692	58.014	1.00	17.06
	ATOM	2582	O TRP	388	46.989	38.499	58.298	1.00	17.43
	ATOM	2583	N ASP	389	45.152	39.807	58.328	1.00	16.13
	ATOM	2584	CA ASP	389	45.764	40.900	59.073	1.00	17.75
60	ATOM	2585	CB ASP	389	45.501	42.231	58.365	1.00	17.00
	ATOM	2586	CG ASP	389	46.187	43.399	59.041	1.00	16.49

	ATOM	2587	OD1	ASP	389	46.524	43.285	239	1.00	18.76
	ATOM	2588	OD2	ASP	389	46.382	44.436	58.376	1.00	14.01
	ATOM	2589	C	ASP	389	45.054	40.888	60.433	1.00	19.06
	ATOM	2590	O	ASP	389	43.828	41.011	60.488	1.00	19.40
5	ATOM	2591	N	PHE	390	45.805	40.726	61.520	1.00	18.93
	ATOM	2592	CA	PHE	390	45.189	40.686	62.846	1.00	22.25
	ATOM	2593	CB	PHE	390	45.850	39.603	63.709	1.00	21.51
	ATOM	2594	CG	PHE	390	45.477	38.208	63.294	1.00	23.36
	ATOM	2595	CD1	PHE	390	45.997	37.655	62.125	1.00	21.45
10	ATOM	2596	CD2	PHE	390	44.547	37.475	64.027	1.00	22.78
	ATOM	2597	CE1	PHE	390	45.595	36.395	61.687	1.00	23.06
	ATOM	2598	CE2	PHE	390	44.136	36.214	63.599	1.00	25.87
	ATOM	2599	CZ	PHE	390	44.661	35.671	62.424	1.00	24.50
	ATOM	2600	C	PHE	390	45.170	42.026	63.573	1.00	23.40
15	ATOM	2601	O	PHE	390	44.937	42.096	64.785	1.00	21.79
	ATOM	2602	N	TYR	391	45.407	43.079	62.799	1.00	24.34
	ATOM	2603	CA	TYR	391	45.399	44.468	63.253	1.00	26.72
	ATOM	2604	CB	TYR	391	43.957	44.944	63.445	1.00	29.46
	ATOM	2605	CG	TYR	391	43.030	44.570	62.312	1.00	32.43
20	ATOM	2606	CD1	TYR	391	42.389	43.336	62.297	1.00	34.89
	ATOM	2607	CE1	TYR	391	41.537	42.978	61.262	1.00	37.09
	ATOM	2608	CD2	TYR	391	42.801	45.445	61.252	1.00	35.38
	ATOM	2609	CE2	TYR	391	41.951	45.095	60.204	1.00	37.31
	ATOM	2610	CZ	TYR	391	41.321	43.860	60.221	1.00	37.51
25	ATOM	2611	OH	TYR	391	40.457	43.505	59.212	1.00	41.58
	ATOM	2612	C	TYR	391	46.205	44.861	64.487	1.00	25.67
	ATOM	2613	O	TYR	391	45.776	45.725	65.247	1.00	27.20
	ATOM	2614	N	ASN	392	47.360	44.243	64.696	1.00	24.64
	ATOM	2615	CA	ASN	392	48.200	44.613	65.829	1.00	24.09
30	ATOM	2616	CB	ASN	392	48.261	43.492	66.881	1.00	23.53
	ATOM	2617	CG	ASN	392	48.960	42.241	66.380	1.00	22.41
	ATOM	2618	OD1	ASN	392	49.428	42.181	65.247	1.00	21.54
	ATOM	2619	ND2	ASN	392	49.032	41.229	67.236	1.00	23.26
	ATOM	2620	C	ASN	392	49.592	44.930	65.295	1.00	24.22
35	ATOM	2621	O	ASN	392	50.548	45.073	66.055	1.00	23.88
	ATOM	2622	N	GLY	393	49.679	45.040	63.969	1.00	22.80
	ATOM	2623	CA	GLY	393	50.934	45.353	63.311	1.00	20.67
	ATOM	2624	C	GLY	393	52.025	44.319	63.515	1.00	21.15
	ATOM	2625	O	GLY	393	53.178	44.560	63.170	1.00	20.78
40	ATOM	2626	N	LYS	394	51.666	43.156	64.048	1.00	20.82
	ATOM	2627	CA	LYS	394	52.657	42.118	64.308	1.00	22.60
	ATOM	2628	CB	LYS	394	52.909	42.024	65.818	1.00	24.94
	ATOM	2629	CG	LYS	394	54.363	42.153	66.216	1.00	30.63
	ATOM	2630	CD	LYS	394	54.916	43.524	65.854	1.00	33.49
45	ATOM	2631	CE	LYS	394	54.355	44.606	66.757	1.00	35.47
	ATOM	2632	NZ	LYS	394	54.708	44.359	68.185	1.00	37.56
	ATOM	2633	C	LYS	394	52.253	40.745	63.789	1.00	21.67
	ATOM	2634	O	LYS	394	53.079	40.001	63.261	1.00	22.03
	ATOM	2635	N	ASP	395	50.973	40.427	63.940	1.00	21.32
50	ATOM	2636	CA	ASP	395	50.425	39.134	63.553	1.00	20.91
	ATOM	2637	CB	ASP	395	49.440	38.689	64.642	1.00	19.12
	ATOM	2638	CG	ASP	395	49.053	37.227	64.534	1.00	19.78
	ATOM	2639	OD1	ASP	395	49.344	36.589	63.501	1.00	20.54
	ATOM	2640	OD2	ASP	395	48.438	36.715	65.495	1.00	21.66
55	ATOM	2641	C	ASP	395	49.737	39.110	62.178	1.00	21.80
	ATOM	2642	O	ASP	395	48.651	39.670	62.001	1.00	20.60
	ATOM	2643	N	PHE	396	50.378	38.454	61.213	1.00	20.77
	ATOM	2644	CA	PHE	396	49.830	38.312	59.863	1.00	20.20
	ATOM	2645	CB	PHE	396	50.634	39.132	58.849	1.00	19.48
60	ATOM	2646	CG	PHE	396	51.005	40.501	59.330	1.00	19.47
	ATOM	2647	CD1	PHE	396	52.212	40.715	59.987	1.00	18.23

	ATOM	2649	CD2	PHE	396	50.149	41.580	60.127	1.00	19.80
	ATOM	2649	CE1	PHE	396	52.564	41.989	60.436	1.00	16.62
	ATOM	2650	CE2	PHE	396	50.492	42.855	59.572	1.00	18.16
	ATOM	2651	CZ	PHE	396	51.703	43.059	60.228	1.00	18.20
5	ATOM	2652	C	PHE	396	49.945	36.832	59.514	1.00	19.88
	ATOM	2653	O	PHE	396	50.942	36.193	59.847	1.00	22.26
	ATOM	2654	N	ARG	397	48.945	36.281	58.840	1.00	19.00
	ATOM	2655	CA	ARG	397	48.989	34.864	58.502	1.00	18.47
	ATOM	2656	CB	ARG	397	48.286	34.037	59.579	1.00	19.59
10	ATOM	2657	CG	ARG	397	48.542	34.466	61.009	1.00	19.93
	ATOM	2658	CD	ARG	397	47.667	33.642	61.944	1.00	20.65
	ATOM	2659	NE	ARG	397	47.588	34.223	63.280	1.00	23.90
	ATOM	2660	CZ	ARG	397	46.806	33.759	64.250	1.00	24.44
	ATOM	2661	NH1	ARG	397	46.033	32.702	64.033	1.00	25.15
15	ATOM	2662	NH2	ARG	397	46.792	34.358	65.434	1.00	25.23
	ATOM	2663	C	ARG	397	48.327	34.526	57.179	1.00	18.41
	ATOM	2664	O	ARG	397	47.504	35.279	56.661	1.00	16.23
	ATOM	2665	N	ILE	398	48.683	33.359	56.653	1.00	17.80
	ATOM	2666	CA	ILE	398	48.098	32.867	55.419	1.00	17.44
20	ATOM	2667	CB	ILE	398	49.172	32.720	54.310	1.00	17.61
	ATOM	2668	CG2	ILE	398	48.685	31.774	53.217	1.00	18.45
	ATOM	2669	CG1	ILE	398	49.498	34.107	53.734	1.00	16.21
	ATOM	2670	CD1	ILE	398	50.554	34.110	52.628	1.00	14.34
	ATOM	2671	C	ILE	398	47.437	31.524	55.724	1.00	17.31
25	ATOM	2672	O	ILE	398	47.964	30.723	56.502	1.00	17.20
	ATOM	2673	N	LYS	399	46.260	31.310	55.145	1.00	16.54
	ATOM	2674	CA	LYS	399	45.506	30.074	55.326	1.00	17.03
	ATOM	2675	CB	LYS	399	44.152	30.355	55.984	1.00	16.41
	ATOM	2676	CG	LYS	399	43.323	29.102	56.237	1.00	16.93
30	ATOM	2677	CD	LYS	399	41.871	29.433	56.562	1.00	18.85
	ATOM	2678	CE	LYS	399	41.218	30.234	55.439	1.00	19.45
	ATOM	2679	NZ	LYS	399	41.423	29.599	54.106	1.00	18.46
	ATOM	2680	C	LYS	399	45.294	29.498	53.934	1.00	18.35
	ATOM	2681	O	LYS	399	44.492	30.013	53.149	1.00	17.47
35	ATOM	2682	N	GLN	400	46.010	28.421	53.633	1.00	18.80
	ATOM	2683	CA	GLN	400	45.936	27.809	52.316	1.00	17.16
	ATOM	2684	CB	GLN	400	46.963	28.505	51.413	1.00	16.79
	ATOM	2685	CG	GLN	400	46.952	28.124	49.946	1.00	19.01
	ATOM	2686	CD	GLN	400	47.967	28.933	49.144	1.00	19.64
40	ATOM	2687	OE1	GLN	400	48.171	30.118	49.401	1.00	19.74
	ATOM	2688	NE2	GLN	400	48.598	28.296	48.163	1.00	21.63
	ATOM	2689	C	GLN	400	46.236	26.313	52.382	1.00	17.92
	ATOM	2690	O	GLN	400	47.236	25.909	52.966	1.00	16.80
	ATOM	2691	N	CYS	401	45.363	25.495	51.805	1.00	19.15
45	ATOM	2692	CA	CYS	401	45.602	24.055	51.771	1.00	21.48
	ATOM	2693	C	CYS	401	46.472	23.902	50.528	1.00	21.39
	ATOM	2694	O	CYS	401	46.039	23.417	49.485	1.00	23.39
	ATOM	2695	CB	CYS	401	44.288	23.278	51.619	1.00	20.09
	ATOM	2696	SG	CYS	401	43.111	23.526	52.994	1.00	23.70
50	ATOM	2697	N	THR	402	47.706	24.363	50.663	1.00	21.55
	ATOM	2698	CA	THR	402	48.681	24.362	49.591	1.00	21.97
	ATOM	2699	CB	THR	402	50.022	24.915	50.096	1.00	21.86
	ATOM	2700	OG1	THR	402	49.800	26.175	50.744	1.00	20.74
	ATOM	2701	CG2	THR	402	50.995	25.103	48.936	1.00	20.95
55	ATOM	2702	C	THR	402	48.941	23.017	48.936	1.00	24.16
	ATOM	2703	O	THR	402	49.112	21.999	49.612	1.00	24.28
	ATOM	2704	N	THR	403	48.965	23.036	47.608	1.00	23.67
	ATOM	2705	CA	THR	403	49.249	21.859	46.802	1.00	23.28
	ATOM	2706	CB	THR	403	48.158	21.620	45.739	1.00	24.61
60	ATOM	2707	OG1	THR	403	46.922	21.312	46.390	1.00	25.63
	ATOM	2708	CG2	THR	403	48.541	20.458	44.830	1.00	26.73

	ATOM	2710	C	THR	403	50.571	22.162	108	1.00	23.10
	ATOM	2710	O	THR	403	50.816	23.296	45.692	1.00	22.88
	ATOM	2711	N	VAL	404	51.428	21.157	45.986	1.00	23.09
	ATOM	2712	CA	VAL	404	52.724	21.359	45.359	1.00	23.31
5	ATOM	2713	CB	VAL	404	53.762	20.342	45.887	1.00	23.84
	ATOM	2714	CG1	VAL	404	55.115	20.589	45.241	1.00	23.34
	ATOM	2715	CG2	VAL	404	53.870	20.457	47.395	1.00	22.82
	ATOM	2716	C	VAL	404	52.691	21.293	43.834	1.00	23.74
	ATOM	2717	O	VAL	404	52.808	20.218	43.241	1.00	23.48
10	ATOM	2718	N	ASN	405	52.517	22.457	43.215	1.00	22.93
	ATOM	2719	CA	ASN	405	52.500	22.602	41.762	1.00	22.84
	ATOM	2720	CB	ASN	405	51.186	22.099	41.154	1.00	22.95
	ATOM	2721	CG	ASN	405	49.970	22.816	41.702	1.00	24.71
	ATOM	2722	OD1	ASN	405	49.970	24.036	41.861	1.00	24.62
15	ATOM	2723	ND2	ASN	405	48.915	22.058	41.981	1.00	24.60
	ATOM	2724	C	ASN	405	52.705	24.078	41.423	1.00	22.93
	ATOM	2725	O	ASN	405	52.654	24.938	42.306	1.00	19.22
	ATOM	2726	N	LEU	406	52.932	24.368	40.147	1.00	23.26
	ATOM	2727	CA	LEU	406	53.173	25.738	39.709	1.00	24.41
20	ATOM	2728	CB	LEU	406	53.514	25.762	38.214	1.00	26.22
	ATOM	2729	CG	LEU	406	54.513	26.821	37.724	1.00	29.20
	ATOM	2730	CD1	LEU	406	54.502	26.848	36.196	1.00	27.25
	ATOM	2731	CD2	LEU	406	54.162	28.194	38.271	1.00	30.58
	ATOM	2732	C	LEU	406	51.984	26.664	39.971	1.00	24.64
25	ATOM	2733	O	LEU	406	52.162	27.808	40.393	1.00	23.62
	ATOM	2734	N	GLU	407	50.774	26.171	39.726	1.00	24.14
	ATOM	2735	CA	GLU	407	49.584	26.987	39.927	1.00	24.63
	ATOM	2736	CB	GLU	407	48.324	26.185	39.589	1.00	26.59
	ATOM	2737	CG	GLU	407	47.126	27.059	39.257	1.00	30.80
30	ATOM	2738	CD	GLU	407	45.917	26.266	38.798	1.00	33.25
	ATOM	2739	OE1	GLU	407	46.094	25.139	38.293	1.00	33.52
	ATOM	2740	OE2	GLU	407	44.787	26.780	38.927	1.00	35.96
	ATOM	2741	C	GLU	407	49.499	27.525	41.357	1.00	23.70
	ATOM	2742	O	GLU	407	49.194	28.697	41.566	1.00	23.73
35	ATOM	2743	N	ASP	408	49.775	26.675	42.340	1.00	21.73
	ATOM	2744	CA	ASP	408	49.717	27.107	43.731	1.00	21.63
	ATOM	2745	CB	ASP	408	49.541	25.899	44.653	1.00	23.21
	ATOM	2746	CG	ASP	408	48.247	25.958	45.438	1.00	23.22
	ATOM	2747	OD1	ASP	408	47.301	26.620	44.963	1.00	25.47
40	ATOM	2748	OD2	ASP	408	48.166	25.340	46.519	1.00	25.23
	ATOM	2749	C	ASP	408	50.944	27.926	44.138	1.00	20.39
	ATOM	2750	O	ASP	408	50.922	28.635	45.146	1.00	19.37
	ATOM	2751	N	LEU	409	52.016	27.831	43.360	1.00	18.98
	ATOM	2752	CA	LEU	409	53.209	28.611	43.659	1.00	18.41
45	ATOM	2753	CB	LEU	409	54.383	28.173	42.780	1.00	20.25
	ATOM	2754	CG	LEU	409	55.692	28.941	43.001	1.00	20.55
	ATOM	2755	CD1	LEU	409	56.113	28.815	44.447	1.00	21.00
	ATOM	2756	CD2	LEU	409	56.778	28.404	42.083	1.00	22.20
	ATOM	2757	C	LEU	409	52.849	30.067	43.362	1.00	17.90
50	ATOM	2758	O	LEU	409	53.274	30.987	44.062	1.00	16.65
	ATOM	2759	N	VAL	410	52.057	30.266	42.313	1.00	16.80
	ATOM	2760	CA	VAL	410	51.618	31.605	41.943	1.00	16.49
	ATOM	2761	CB	VAL	410	50.920	31.600	40.561	1.00	16.89
	ATOM	2762	CG1	VAL	410	50.352	32.977	40.247	1.00	14.92
55	ATOM	2763	CG2	VAL	410	51.919	31.198	39.491	1.00	15.83
	ATOM	2764	C	VAL	410	50.656	32.106	43.024	1.00	15.73
	ATOM	2765	O	VAL	410	50.732	33.258	43.443	1.00	14.75
	ATOM	2766	N	VAL	411	49.763	31.232	43.484	1.00	15.97
	ATOM	2767	CA	VAL	411	48.813	31.603	44.533	1.00	15.75
60	ATOM	2768	CB	VAL	411	47.870	30.425	44.902	1.00	15.53
	ATOM	2769	CG1	VAL	411	47.006	30.805	46.114	1.00	11.21

	ATOM	2770	2	VAL	411	46.982	30.070	43.	1.00	14.36
	ATOM	2771	C	VAL	411	49.561	32.034	45.796	1.00	16.60
	ATOM	2772	O	VAL	411	49.194	33.015	46.445	1.00	14.95
	ATOM	2773	N	ALA	412	50.610	31.296	46.146	1.00	16.80
5	ATOM	2774	CA	ALA	412	51.392	31.624	47.328	1.00	16.33
	ATOM	2775	CB	ALA	412	52.541	30.632	47.490	1.00	17.31
	ATOM	2776	C	ALA	412	51.930	33.047	47.213	1.00	16.81
	ATOM	2777	O	ALA	412	51.940	33.793	48.188	1.00	15.68
	ATOM	2778	N	HIS	413	52.386	33.419	46.018	1.00	16.29
10	ATOM	2779	CA	HIS	413	52.908	34.764	45.802	1.00	14.95
	ATOM	2780	CB	HIS	413	53.576	34.886	44.425	1.00	14.73
	ATOM	2781	CG	HIS	413	54.942	34.282	44.362	1.00	14.13
	ATOM	2782	CD2	HIS	413	56.169	34.855	44.354	1.00	14.28
	ATOM	2783	ND1	HIS	413	55.155	32.920	44.333	1.00	13.46
15	ATOM	2784	CE1	HIS	413	56.454	32.681	44.310	1.00	14.23
	ATOM	2785	NE2	HIS	413	57.091	33.837	44.322	1.00	15.75
	ATOM	2786	C	HIS	413	51.768	35.765	45.910	1.00	13.28
	ATOM	2787	O	HIS	413	51.923	36.834	46.493	1.00	11.46
	ATOM	2788	N	HIS	414	50.620	35.409	45.342	1.00	14.51
20	ATOM	2789	CA	HIS	414	49.447	36.276	45.391	1.00	13.47
	ATOM	2790	CB	HIS	414	48.235	35.570	44.775	1.00	15.00
	ATOM	2791	CG	HIS	414	46.971	36.370	44.849	1.00	15.40
	ATOM	2792	CD2	HIS	414	45.972	36.376	45.766	1.00	13.24
	ATOM	2793	ND1	HIS	414	46.647	37.339	43.923	1.00	14.33
25	ATOM	2794	CE1	HIS	414	45.504	37.908	44.267	1.00	14.69
	ATOM	2795	NE2	HIS	414	45.075	37.341	45.381	1.00	12.08
	ATOM	2796	C	HIS	414	49.136	36.626	46.845	1.00	14.00
	ATOM	2797	O	HIS	414	48.984	37.802	47.190	1.00	13.07
	ATOM	2798	N	GLU	415	49.049	35.599	47.690	1.00	12.38
30	ATOM	2799	CA	GLU	415	48.742	35.788	49.105	1.00	13.04
	ATOM	2800	CB	GLU	415	48.489	34.440	49.782	1.00	11.80
	ATOM	2801	CG	GLU	415	47.322	33.650	49.205	1.00	12.84
	ATOM	2802	CD	GLU	415	46.014	34.422	49.240	1.00	12.28
	ATOM	2803	OE1	GLU	415	45.833	35.250	50.159	1.00	11.52
35	ATOM	2804	OE2	GLU	415	45.159	34.188	48.359	1.00	12.50
	ATOM	2805	C	GLU	415	49.839	36.535	49.850	1.00	13.54
	ATOM	2806	O	GLU	415	49.551	37.346	50.726	1.00	14.84
	ATOM	2807	N	MET	416	51.096	36.258	49.512	1.00	13.52
	ATOM	2808	CA	MET	416	52.208	36.941	50.167	1.00	14.41
40	ATOM	2809	CB	MET	416	53.542	36.304	49.767	1.00	14.35
	ATOM	2810	CG	MET	416	53.786	34.943	50.429	1.00	15.99
	ATOM	2811	SD	MET	416	54.132	35.070	52.218	1.00	17.59
	ATOM	2812	CE	MET	416	55.885	35.543	52.156	1.00	14.94
	ATOM	2813	C	MET	416	52.176	38.424	49.796	1.00	13.49
45	ATOM	2814	O	MET	416	52.660	39.276	50.543	1.00	11.88
	ATOM	2815	N	GLY	417	51.592	38.725	48.642	1.00	13.47
	ATOM	2816	CA	GLY	417	51.473	40.107	48.217	1.00	11.88
	ATOM	2817	C	GLY	417	50.547	40.833	49.186	1.00	10.84
	ATOM	2818	O	GLY	417	50.774	41.995	49.517	1.00	10.89
50	ATOM	2819	N	HIS	418	49.499	40.146	49.639	1.00	11.02
	ATOM	2820	CA	HIS	418	48.555	40.732	50.595	1.00	12.04
	ATOM	2821	CB	HIS	418	47.382	39.784	50.864	1.00	11.04
	ATOM	2822	CG	HIS	418	46.385	39.711	49.752	1.00	12.59
	ATOM	2823	CD2	HIS	418	45.842	38.648	49.112	1.00	9.69
55	ATOM	2824	ND1	HIS	418	45.783	40.830	49.214	1.00	13.07
	ATOM	2825	CE1	HIS	418	44.912	40.458	48.294	1.00	11.52
	ATOM	2826	NE2	HIS	418	44.928	39.140	48.213	1.00	12.75
	ATOM	2827	C	HIS	418	49.271	41.003	51.916	1.00	11.39
	ATOM	2828	O	HIS	418	49.122	42.071	52.512	1.00	11.43
60	ATOM	2829	N	ILE	419	50.039	40.018	52.373	1.00	11.02
	ATOM	2830	CA	ILE	419	50.788	40.147	53.619	1.00	11.33

	ATOM	2831	CB	ILE	419	51.613	38.874	7905	1.00	12.82
	ATOM	2832	CG2	ILE	419	52.405	39.042	55.195	1.00	12.45
	ATOM	2833	CG1	ILE	419	50.681	37.658	53.991	1.00	12.12
	ATOM	2834	CD1	ILE	419	49.672	37.730	55.117	1.00	14.37
5	ATOM	2835	C	ILE	419	51.738	41.343	53.548	1.00	11.48
	ATOM	2836	O	ILE	419	51.853	42.113	54.500	1.00	12.38
	ATOM	2837	N	GLN	420	52.417	41.496	52.417	1.00	11.52
	ATOM	2838	CA	GLN	420	53.347	42.607	52.245	1.00	13.30
	ATOM	2839	CB	GLN	420	54.004	42.544	50.859	1.00	12.77
10	ATOM	2840	CG	GLN	420	55.044	43.636	50.636	1.00	14.92
	ATOM	2841	CD	GLN	420	56.256	43.491	51.546	1.00	14.49
	ATOM	2842	OE1	GLN	420	56.897	44.479	51.904	1.00	17.00
	ATOM	2843	NE2	GLN	420	56.585	42.255	51.908	1.00	14.95
	ATOM	2844	C	GLN	420	52.599	43.932	52.412	1.00	13.79
15	ATOM	2845	O	GLN	420	53.065	44.844	53.101	1.00	14.70
	ATOM	2846	N	TYR	421	51.435	44.035	51.780	1.00	13.96
	ATOM	2847	CA	TYR	421	50.631	45.246	51.876	1.00	13.60
	ATOM	2848	CB	TYR	421	49.372	45.099	51.014	1.00	10.92
	ATOM	2849	CG	TYR	421	49.037	46.321	50.179	1.00	11.34
20	ATOM	2850	CD1	TYR	421	48.590	46.183	48.862	1.00	10.38
	ATOM	2851	CE1	TYR	421	48.255	47.287	48.093	1.00	8.53
	ATOM	2852	CD2	TYR	421	49.140	47.611	50.706	1.00	10.33
	ATOM	2853	CE2	TYR	421	48.799	48.737	49.940	1.00	11.19
	ATOM	2854	CZ	TYR	421	48.356	48.561	48.634	1.00	12.22
25	ATOM	2855	OH	TYR	421	47.985	49.647	47.872	1.00	10.08
	ATOM	2856	C	TYR	421	50.259	45.499	53.348	1.00	13.85
	ATOM	2857	O	TYR	421	50.371	46.626	53.835	1.00	12.91
	ATOM	2858	N	PHE	422	49.823	44.451	54.049	1.00	15.40
	ATOM	2859	CA	PHE	422	49.461	44.567	55.466	1.00	17.19
30	ATOM	2860	CB	PHE	422	49.173	43.189	56.076	1.00	15.34
	ATOM	2861	CG	PHE	422	47.925	42.526	55.559	1.00	15.78
	ATOM	2862	CD1	PHE	422	47.776	41.143	55.655	1.00	14.31
	ATOM	2863	CD2	PHE	422	46.896	43.272	54.994	1.00	14.76
	ATOM	2864	CE1	PHE	422	46.621	40.510	55.197	1.00	16.76
35	ATOM	2865	CE2	PHE	422	45.734	42.649	54.532	1.00	16.42
	ATOM	2866	CZ	PHE	422	45.599	41.265	54.633	1.00	16.96
	ATOM	2867	C	PHE	422	50.611	45.185	56.254	1.00	17.06
	ATOM	2868	O	PHE	422	50.412	46.105	57.045	1.00	17.66
	ATOM	2869	N	MET	423	51.814	44.664	56.031	1.00	16.17
40	ATOM	2870	CA	MET	423	53.000	45.134	56.737	1.00	17.00
	ATOM	2871	CB	MET	423	54.181	44.190	56.486	1.00	18.15
	ATOM	2872	CG	MET	423	53.943	42.754	56.931	1.00	19.99
	ATOM	2873	SD	MET	423	55.472	41.792	57.000	1.00	20.03
	ATOM	2874	CE	MET	423	55.783	41.471	55.247	1.00	18.10
45	ATOM	2875	C	MET	423	53.413	46.552	56.373	1.00	17.22
	ATOM	2876	O	MET	423	53.849	47.315	57.236	1.00	16.52
	ATOM	2877	N	GLN	424	53.277	46.905	55.097	1.00	16.46
	ATOM	2878	CA	GLN	424	53.659	48.234	54.631	1.00	15.32
	ATOM	2879	CB	GLN	424	53.579	48.301	53.102	1.00	16.47
50	ATOM	2880	CG	GLN	424	54.640	47.495	52.360	1.00	17.02
	ATOM	2881	CD	GLN	424	56.031	48.092	52.496	1.00	19.21
	ATOM	2882	OE1	GLN	424	56.184	49.288	52.757	1.00	16.73
	ATOM	2883	NE2	GLN	424	57.053	47.266	52.297	1.00	17.82
	ATOM	2884	C	GLN	424	52.836	49.377	55.224	1.00	15.29
55	ATOM	2885	O	GLN	424	53.372	50.455	55.482	1.00	15.54
	ATOM	2886	N	TYR	425	51.539	49.157	55.433	1.00	15.59
	ATOM	2887	CA	TYR	425	50.687	50.213	55.980	1.00	15.62
	ATOM	2888	CB	TYR	425	49.454	50.432	55.078	1.00	14.74
	ATOM	2889	CG	TYR	425	48.519	49.240	54.865	1.00	14.73
60	ATOM	2890	CD1	TYR	425	48.073	48.457	55.935	1.00	11.96
	ATOM	2891	CE1	TYR	425	47.115	47.446	55.750	1.00	13.33

	ATOM	2892	TYR	425	47.990	48.972	53.401	1.00	14.45
	ATOM	2893	CE2 TYR	425	47.033	47.969	53.401	1.00	14.29
	ATOM	2894	CZ TYR	425	46.599	47.213	54.481	1.00	15.26
	ATOM	2895	OH TYR	425	45.633	46.253	54.287	1.00	13.69
5	ATOM	2896	C TYR	425	50.235	49.999	57.420	1.00	15.99
	ATOM	2897	O TYR	425	49.311	50.662	57.887	1.00	15.53
	ATOM	2898	N LYS	426	50.903	49.096	58.131	1.00	18.15
	ATOM	2899	CA LYS	426	50.535	48.777	59.509	1.00	19.68
	ATOM	2900	CB LYS	426	51.446	47.669	60.053	1.00	19.35
10	ATOM	2901	CG LYS	426	52.893	48.084	60.268	1.00	21.71
	ATOM	2902	CD LYS	426	53.700	46.947	60.895	1.00	23.93
	ATOM	2903	CE LYS	426	55.145	47.355	61.133	1.00	25.11
	ATOM	2904	NZ LYS	426	55.224	48.568	61.996	1.00	30.09
	ATOM	2905	C LYS	426	50.533	49.947	60.495	1.00	20.54
15	ATOM	2906	O LYS	426	49.903	49.864	61.550	1.00	20.64
	ATOM	2907	N ASP	427	51.221	51.034	60.160	1.00	21.79
	ATOM	2908	CA ASP	427	51.281	52.177	61.064	1.00	23.05
	ATOM	2909	CB ASP	427	52.692	52.763	61.078	1.00	23.93
	ATOM	2910	CG ASP	427	53.698	51.805	61.664	1.00	26.63
20	ATOM	2911	OD1 ASP	427	53.394	51.228	62.732	1.00	26.74
	ATOM	2912	OD2 ASP	427	54.780	51.631	61.066	1.00	26.70
	ATOM	2913	C ASP	427	50.275	53.280	60.787	1.00	22.13
	ATOM	2914	O ASP	427	50.265	54.302	61.472	1.00	21.25
	ATOM	2915	N LEU	428	49.433	53.078	59.783	1.00	21.00
25	ATOM	2916	CA LEU	428	48.422	54.071	59.456	1.00	20.38
	ATOM	2917	CB LEU	428	48.002	53.953	57.988	1.00	20.36
	ATOM	2918	CG LEU	428	49.012	54.228	56.874	1.00	18.26
	ATOM	2919	CD1 LEU	428	48.314	54.052	55.532	1.00	16.44
	ATOM	2920	CD2 LEU	428	49.571	55.642	57.005	1.00	17.84
30	ATOM	2921	C LEU	428	47.200	53.831	60.324	1.00	19.95
	ATOM	2922	O LEU	428	47.041	52.754	60.899	1.00	20.02
	ATOM	2923	N PRO	429	46.332	54.846	60.457	1.00	20.13
	ATOM	2924	CD PRO	429	46.480	56.257	60.062	1.00	18.31
	ATOM	2925	CA PRO	429	45.129	54.650	61.269	1.00	19.43
35	ATOM	2926	CB PRO	429	44.377	55.960	61.083	1.00	18.57
	ATOM	2927	CG PRO	429	45.487	56.952	60.980	1.00	19.44
	ATOM	2928	C PRO	429	44.394	53.459	60.652	1.00	19.56
	ATOM	2929	O PRO	429	44.330	53.336	59.429	1.00	18.88
	ATOM	2930	N VAL	430	43.851	52.591	61.495	1.00	19.81
40	ATOM	2931	CA VAL	430	43.159	51.393	61.038	1.00	21.00
	ATOM	2932	CB VAL	430	42.475	50.677	62.232	1.00	23.09
	ATOM	2933	CG1 VAL	430	41.214	51.418	62.644	1.00	23.83
	ATOM	2934	CG2 VAL	430	42.168	49.241	61.870	1.00	24.99
	ATOM	2935	C VAL	430	42.135	51.614	59.913	1.00	20.48
45	ATOM	2936	O VAL	430	42.021	50.789	59.006	1.00	18.44
	ATOM	2937	N ALA	431	41.405	52.724	59.957	1.00	20.17
	ATOM	2938	CA ALA	431	40.401	53.002	58.933	1.00	20.14
	ATOM	2939	CB ALA	431	39.587	54.236	59.311	1.00	21.04
	ATOM	2940	C ALA	431	41.029	53.197	57.560	1.00	19.75
50	ATOM	2941	O ALA	431	40.350	53.110	56.540	1.00	20.64
	ATOM	2942	N LEU	432	42.330	53.456	57.537	1.00	19.42
	ATOM	2943	CA LEU	432	43.023	53.667	56.277	1.00	17.67
	ATOM	2944	CB LEU	432	43.821	54.974	56.336	1.00	17.92
	ATOM	2945	CG LEU	432	43.038	56.238	56.721	1.00	16.23
55	ATOM	2946	CD1 LEU	432	43.996	57.416	56.789	1.00	18.02
	ATOM	2947	CD2 LEU	432	41.929	56.512	55.703	1.00	17.85
	ATOM	2948	C LEU	432	43.946	52.500	55.935	1.00	18.33
	ATOM	2949	O LEU	432	44.758	52.592	55.010	1.00	19.78
	ATOM	2950	N ARG	433	43.824	51.401	56.676	1.00	17.58
60	ATOM	2951	CA ARG	433	44.654	50.231	56.410	1.00	19.13
	ATOM	2952	CB ARG	433	44.894	49.428	57.695	1.00	20.01

	ATOM	2953	CG	ARG	433	45.700	50.170	61	1.00	24.17
	ATOM	2954	CD	ARG	433	46.094	49.238	59.910	1.00	25.60
	ATOM	2955	NE	ARG	433	46.572	49.977	61.076	1.00	30.87
	ATOM	2956	CZ	ARG	433	47.022	49.413	62.196	1.00	32.45
5	ATOM	2957	NH1	ARG	433	47.065	48.091	62.317	1.00	31.35
	ATOM	2958	NH2	ARG	433	47.423	50.177	63.203	1.00	33.39
	ATOM	2959	C	ARG	433	44.029	49.333	55.339	1.00	17.92
	ATOM	2960	O	ARG	433	43.527	48.245	55.626	1.00	16.81
	ATOM	2961	N	GLU	434	44.055	49.817	54.102	1.00	17.88
10	ATOM	2962	CA	GLU	434	43.532	49.088	52.951	1.00	18.38
	ATOM	2963	CB	GLU	434	42.062	49.454	52.704	1.00	21.40
	ATOM	2964	CG	GLU	434	41.126	49.146	53.866	1.00	30.47
	ATOM	2965	CD	GLU	434	40.964	47.655	54.121	1.00	35.68
	ATOM	2966	OE1	GLU	434	41.691	46.848	53.498	1.00	39.78
15	ATOM	2967	OE2	GLU	434	40.105	47.288	54.953	1.00	39.56
	ATOM	2968	C	GLU	434	44.369	49.490	51.741	1.00	15.81
	ATOM	2969	O	GLU	434	45.184	50.408	51.827	1.00	14.18
	ATOM	2970	N	GLY	435	44.178	48.804	50.617	1.00	15.92
	ATOM	2971	CA	GLY	435	44.926	49.153	49.419	1.00	14.49
20	ATOM	2972	C	GLY	435	44.383	50.441	48.818	1.00	14.11
	ATOM	2973	O	GLY	435	43.296	50.881	49.201	1.00	12.46
	ATOM	2974	N	ALA	436	45.132	51.054	47.900	1.00	13.32
	ATOM	2975	CA	ALA	436	44.687	52.293	47.248	1.00	13.39
	ATOM	2976	CB	ALA	436	45.571	52.601	46.044	1.00	10.25
25	ATOM	2977	C	ALA	436	43.230	52.066	46.828	1.00	11.87
	ATOM	2978	O	ALA	436	42.389	52.956	46.927	1.00	12.19
	ATOM	2979	N	ASN	437	42.965	50.864	46.329	1.00	12.23
	ATOM	2980	CA	ASN	437	41.619	50.400	45.989	1.00	11.91
	ATOM	2981	CB	ASN	437	41.104	50.904	44.617	1.00	12.44
30	ATOM	2982	CG	ASN	437	41.809	50.287	43.430	1.00	10.41
	ATOM	2983	OD1	ASN	437	42.024	49.079	43.363	1.00	12.22
	ATOM	2984	ND2	ASN	437	42.144	51.126	42.458	1.00	10.38
	ATOM	2985	C	ASN	437	41.771	48.885	46.051	1.00	11.58
	ATOM	2986	O	ASN	437	42.890	48.383	46.049	1.00	12.17
35	ATOM	2987	N	PRO	438	40.663	48.136	46.142	1.00	12.13
	ATOM	2988	CD	PRO	438	39.250	48.549	46.234	1.00	10.54
	ATOM	2989	CA	PRO	438	40.789	46.677	46.220	1.00	10.70
	ATOM	2990	CB	PRO	438	39.338	46.205	46.162	1.00	12.07
	ATOM	2991	CG	PRO	438	38.607	47.326	46.867	1.00	11.56
40	ATOM	2992	C	PRO	438	41.674	46.026	45.160	1.00	11.01
	ATOM	2993	O	PRO	438	42.343	45.031	45.441	1.00	9.92
	ATOM	2994	N	GLY	439	41.682	46.591	43.955	1.00	10.86
	ATOM	2995	CA	GLY	439	42.494	46.049	42.876	1.00	11.19
	ATOM	2996	C	GLY	439	43.984	46.073	43.175	1.00	11.99
45	ATOM	2997	O	GLY	439	44.710	45.135	42.830	1.00	10.62
	ATOM	2998	N	PHE	440	44.452	47.148	43.806	1.00	11.06
	ATOM	2999	CA	PHE	440	45.866	47.260	44.156	1.00	11.17
	ATOM	3000	CB	PHE	440	46.157	48.609	44.831	1.00	11.18
	ATOM	3001	CG	PHE	440	46.364	49.745	43.864	1.00	12.13
50	ATOM	3002	CD1	PHE	440	45.377	50.089	42.947	1.00	11.54
	ATOM	3003	CD2	PHE	440	47.554	50.472	43.871	1.00	12.86
	ATOM	3004	CE1	PHE	440	45.572	51.146	42.045	1.00	11.15
	ATOM	3005	CE2	PHE	440	47.755	51.526	42.977	1.00	12.18
	ATOM	3006	CZ	PHE	440	46.763	51.860	42.065	1.00	11.17
55	ATOM	3007	C	PHE	440	46.275	46.135	45.098	1.00	11.04
	ATOM	3008	O	PHE	440	47.326	45.519	44.926	1.00	10.51
	ATOM	3009	N	HIS	441	45.445	45.873	46.104	1.00	10.42
	ATOM	3010	CA	HIS	441	45.753	44.822	47.066	1.00	11.23
	ATOM	3011	CB	HIS	441	44.640	44.720	48.116	1.00	11.68
60	ATOM	3012	CG	HIS	441	45.144	44.607	49.523	1.00	11.91
	ATOM	3013	CD2	HIS	441	44.919	45.379	50.614	1.00	10.21

	ATOM	3014	HIS	441	45.976	43.589	49.100	1.00	10.64
	ATOM	3015	CE1 HIS	441	46.237	43.736	51.228	1.00	11.94
	ATOM	3016	NE2 HIS	441	45.607	44.815	51.661	1.00	11.66
	ATOM	3017	C HIS	441	45.921	43.475	46.364	1.00	10.83
5	ATOM	3018	O HIS	441	46.780	42.674	46.736	1.00	9.33
	ATOM	3019	N GLU	442	45.106	43.241	45.339	1.00	12.01
	ATOM	3020	CA GLU	442	45.144	41.991	44.586	1.00	10.66
	ATOM	3021	CB GLU	442	43.838	41.819	43.801	1.00	11.06
	ATOM	3022	CG GLU	442	42.565	41.755	44.645	1.00	7.88
10	ATOM	3023	CD GLU	442	42.614	40.643	45.677	1.00	8.56
	ATOM	3024	OE1 GLU	442	43.226	39.598	45.376	1.00	8.96
	ATOM	3025	OE2 GLU	442	42.044	40.809	46.778	1.00	8.52
	ATOM	3026	C GLU	442	46.320	41.897	43.607	1.00	13.30
	ATOM	3027	O GLU	442	46.815	40.807	43.323	1.00	14.12
15	ATOM	3028	N ALA	443	46.782	43.038	43.105	1.00	14.06
	ATOM	3029	CA ALA	443	47.860	43.056	42.112	1.00	14.79
	ATOM	3030	CB ALA	443	47.801	44.369	41.336	1.00	13.68
	ATOM	3031	C ALA	443	49.299	42.808	42.575	1.00	14.18
	ATOM	3032	O ALA	443	50.096	42.229	41.835	1.00	13.95
20	ATOM	3033	N ILE	444	49.631	43.249	43.784	1.00	13.76
	ATOM	3034	CA ILE	444	50.989	43.119	44.311	1.00	13.53
	ATOM	3035	CB ILE	444	51.035	43.500	45.810	1.00	13.26
	ATOM	3036	CG2 ILE	444	52.476	43.493	46.312	1.00	11.75
	ATOM	3037	CG1 ILE	444	50.430	44.898	46.002	1.00	11.55
25	ATOM	3038	CD1 ILE	444	51.090	45.972	45.158	1.00	13.98
	ATOM	3039	C ILE	444	51.671	41.757	44.116	1.00	13.95
	ATOM	3040	O ILE	444	52.710	41.666	43.454	1.00	10.36
	ATOM	3041	N GLY	445	51.095	40.709	44.695	1.00	12.71
	ATOM	3042	CA GLY	445	51.678	39.389	44.562	1.00	12.69
30	ATOM	3043	C GLY	445	51.785	38.914	43.125	1.00	13.85
	ATOM	3044	O GLY	445	52.774	38.284	42.746	1.00	14.14
	ATOM	3045	N ASP	446	50.767	39.215	42.324	1.00	12.80
	ATOM	3046	CA ASP	446	50.742	38.805	40.923	1.00	12.50
	ATOM	3047	CB ASP	446	49.398	39.181	40.282	1.00	9.49
35	ATOM	3048	CG ASP	446	48.261	38.259	40.714	1.00	10.86
	ATOM	3049	OD1 ASP	446	48.321	37.706	41.831	1.00	9.74
	ATOM	3050	OD2 ASP	446	47.293	38.098	39.946	1.00	11.31
	ATOM	3051	C ASP	446	51.885	39.421	40.125	1.00	13.90
	ATOM	3052	O ASP	446	52.437	38.782	39.224	1.00	12.58
40	ATOM	3053	N VAL	447	52.230	40.665	40.452	1.00	13.86
	ATOM	3054	CA VAL	447	53.307	41.351	39.758	1.00	13.18
	ATOM	3055	CB VAL	447	53.520	42.778	40.313	1.00	13.78
	ATOM	3056	CG1 VAL	447	54.745	43.414	39.661	1.00	13.13
	ATOM	3057	CG2 VAL	447	52.280	43.634	40.037	1.00	11.10
45	ATOM	3058	C VAL	447	54.600	40.553	39.891	1.00	13.89
	ATOM	3059	O VAL	447	55.263	40.274	38.897	1.00	14.12
	ATOM	3060	N LEU	448	54.954	40.184	41.119	1.00	13.93
	ATOM	3061	CA LEU	448	56.164	39.403	41.345	1.00	14.69
	ATOM	3062	CB LEU	448	56.424	39.217	42.845	1.00	13.90
50	ATOM	3063	CG LEU	448	57.185	40.346	43.548	1.00	14.37
	ATOM	3064	CD1 LEU	448	56.377	41.638	43.511	1.00	13.68
	ATOM	3065	CD2 LEU	448	57.474	39.937	44.980	1.00	14.99
	ATOM	3066	C LEU	448	56.068	38.040	40.665	1.00	14.58
	ATOM	3067	O LEU	448	57.030	37.580	40.047	1.00	16.65
55	ATOM	3068	N ALA	449	54.909	37.400	40.776	1.00	14.25
	ATOM	3069	CA ALA	449	54.696	36.094	40.161	1.00	14.13
	ATOM	3070	CB ALA	449	53.303	35.576	40.499	1.00	12.41
	ATOM	3071	C ALA	449	54.890	36.143	38.639	1.00	14.00
	ATOM	3072	O ALA	449	55.241	35.136	38.020	1.00	14.32
60	ATOM	3073	N LEU	450	54.652	37.304	38.033	1.00	13.43
	ATOM	3074	CA LEU	450	54.850	37.440	36.592	1.00	13.96

	ATOM	3076	CB	LEU	450	54.473	38.853	121	1.00	13.77
	ATOM	3076	CG	LEU	450	52.976	39.149	35.969	1.00	12.17
	ATOM	3077	CD1	LEU	450	52.758	40.620	35.637	1.00	9.82
	ATOM	3078	CD2	LEU	450	52.398	38.262	34.869	1.00	11.71
5	ATOM	3079	C	LEU	450	56.325	37.165	36.283	1.00	14.53
	ATOM	3080	O	LEU	450	56.651	36.443	35.339	1.00	15.40
	ATOM	3081	N	SER	451	57.212	37.745	37.085	1.00	13.59
	ATOM	3082	CA	SER	451	58.644	37.540	36.900	1.00	15.77
	ATOM	3083	CB	SER	451	59.441	38.498	37.789	1.00	14.12
10	ATOM	3084	OG	SER	451	59.381	39.818	37.273	1.00	14.82
	ATOM	3085	C	SER	451	59.035	36.098	37.211	1.00	15.90
	ATOM	3086	O	SER	451	59.843	35.501	36.501	1.00	16.58
	ATOM	3087	N	VAL	452	58.448	35.543	38.269	1.00	16.02
	ATOM	3088	CA	VAL	452	58.722	34.169	38.674	1.00	17.43
15	ATOM	3089	CB	VAL	452	57.903	33.786	39.933	1.00	16.72
	ATOM	3090	CG1	VAL	452	58.108	32.308	40.274	1.00	16.74
	ATOM	3091	CG2	VAL	452	58.321	34.657	41.102	1.00	18.21
	ATOM	3092	C	VAL	452	58.381	33.182	37.554	1.00	18.85
	ATOM	3093	O	VAL	452	59.101	32.205	37.337	1.00	18.12
20	ATOM	3094	N	SER	453	57.287	33.453	36.843	1.00	18.69
	ATOM	3095	CA	SER	453	56.820	32.590	35.755	1.00	18.97
	ATOM	3096	CB	SER	453	55.402	33.001	35.336	1.00	18.72
	ATOM	3097	OG	SER	453	54.463	32.712	36.356	1.00	19.55
	ATOM	3098	C	SER	453	57.693	32.523	34.506	1.00	18.98
25	ATOM	3099	O	SER	453	57.559	31.593	33.707	1.00	17.86
	ATOM	3100	N	THR	454	58.576	33.499	34.320	1.00	18.89
	ATOM	3101	CA	THR	454	59.426	33.499	33.138	1.00	19.78
	ATOM	3102	CB	THR	454	60.385	34.699	33.123	1.00	18.87
	ATOM	3103	OG1	THR	454	61.150	34.722	34.336	1.00	19.79
30	ATOM	3104	CG2	THR	454	59.603	35.997	32.975	1.00	18.32
	ATOM	3105	C	THR	454	60.239	32.217	33.041	1.00	21.57
	ATOM	3106	O	THR	454	60.734	31.707	34.045	1.00	22.35
	ATOM	3107	N	PRO	455	60.378	31.673	31.822	1.00	21.55
	ATOM	3108	CD	PRO	455	59.824	32.153	30.540	1.00	21.60
35	ATOM	3109	CA	PRO	455	61.142	30.440	31.632	1.00	23.12
	ATOM	3110	CB	PRO	455	61.278	30.354	30.113	1.00	22.44
	ATOM	3111	CG	PRO	455	59.972	30.933	29.641	1.00	20.77
	ATOM	3112	C	PRO	455	62.489	30.489	32.338	1.00	23.94
	ATOM	3113	O	PRO	455	62.854	29.566	33.064	1.00	23.00
40	ATOM	3114	N	LYS	456	63.216	31.582	32.140	1.00	24.94
	ATOM	3115	CA	LYS	456	64.527	31.726	32.748	1.00	25.77
	ATOM	3116	CB	LYS	456	65.186	33.029	32.289	1.00	28.54
	ATOM	3117	CG	LYS	456	66.708	32.960	32.293	1.00	33.33
	ATOM	3118	CD	LYS	456	67.343	34.308	31.998	1.00	36.84
45	ATOM	3119	CE	LYS	456	68.857	34.190	31.983	1.00	39.24
	ATOM	3120	NZ	LYS	456	69.341	33.419	33.163	1.00	42.84
	ATOM	3121	C	LYS	456	64.479	31.679	34.274	1.00	25.66
	ATOM	3122	O	LYS	456	65.334	31.055	34.905	1.00	24.62
	ATOM	3123	N	HIS	457	63.485	32.332	34.873	1.00	23.14
50	ATOM	3124	CA	HIS	457	63.386	32.325	36.326	1.00	22.18
	ATOM	3125	CB	HIS	457	62.312	33.299	36.817	1.00	22.71
	ATOM	3126	CG	HIS	457	62.327	33.495	38.301	1.00	21.95
	ATOM	3127	CD2	HIS	457	61.859	32.717	39.307	1.00	24.49
	ATOM	3128	ND1	HIS	457	62.959	34.560	38.904	1.00	21.90
55	ATOM	3129	CE1	HIS	457	62.884	34.429	40.217	1.00	24.67
	ATOM	3130	NE2	HIS	457	62.222	33.317	40.488	1.00	24.22
	ATOM	3131	C	HIS	457	63.067	30.922	36.836	1.00	21.29
	ATOM	3132	O	HIS	457	63.643	30.470	37.826	1.00	20.13
	ATOM	3133	N	LEU	458	62.136	30.243	36.170	1.00	21.42
60	ATOM	3134	CA	LEU	458	61.764	28.890	36.564	1.00	22.05
	ATOM	3135	CB	LEU	458	60.633	28.355	35.677	1.00	21.29

	ATOM	3136	LEU	458	59.243	28.976	35.800	1.00	21.21
	ATOM	3137	CD1 LEU	458	58.267	28.346	34.873	1.00	20.79
	ATOM	3138	CD2 LEU	458	58.768	28.762	37.294	1.00	20.98
	ATOM	3139	C LEU	458	62.983	27.976	36.465	1.00	22.14
5	ATOM	3140	O LEU	458	63.166	27.082	37.287	1.00	21.63
	ATOM	3141	N HIS	459	63.820	28.213	35.461	1.00	23.49
	ATOM	3142	CA HIS	459	65.019	27.404	35.284	1.00	25.12
	ATOM	3143	CB HIS	459	65.688	27.713	33.939	1.00	26.57
	ATOM	3144	CG HIS	459	66.953	26.941	33.701	1.00	32.18
10	ATOM	3145	CD2 HIS	459	67.171	25.755	33.084	1.00	33.64
	ATOM	3146	ND1 HIS	459	68.180	27.358	34.173	1.00	34.37
	ATOM	3147	CE1 HIS	459	69.099	26.461	33.859	1.00	34.36
	ATOM	3148	NE2 HIS	459	68.513	25.478	33.199	1.00	35.32
	ATOM	3149	C HIS	459	65.985	27.657	36.441	1.00	23.17
15	ATOM	3150	O HIS	459	66.698	26.751	36.867	1.00	22.80
	ATOM	3151	N SER	460	65.991	28.882	36.963	1.00	22.86
	ATOM	3152	CA SER	460	66.870	29.218	38.083	1.00	22.31
	ATOM	3153	CB SER	460	66.877	30.734	38.341	1.00	22.68
	ATOM	3154	OG SER	460	65.731	31.148	39.071	1.00	26.41
20	ATOM	3155	C SER	460	66.407	28.480	39.339	1.00	21.77
	ATOM	3156	O SER	460	67.176	28.297	40.283	1.00	18.91
	ATOM	3157	N LEU	461	65.141	28.069	39.349	1.00	21.28
	ATOM	3158	CA LEU	461	64.589	27.326	40.480	1.00	23.33
	ATOM	3159	CB LEU	461	63.103	27.652	40.678	1.00	21.27
25	ATOM	3160	CG LEU	461	62.745	29.061	41.153	1.00	21.36
	ATOM	3161	CD1 LEU	461	61.230	29.193	41.235	1.00	21.05
	ATOM	3162	CD2 LEU	461	63.383	29.330	42.513	1.00	19.25
	ATOM	3163	C LEU	461	64.748	25.839	40.197	1.00	24.98
	ATOM	3164	O LEU	461	64.394	24.992	41.022	1.00	25.06
30	ATOM	3165	N ASN	462	65.280	25.543	39.012	1.00	27.22
	ATOM	3166	CA ASN	462	65.515	24.178	38.555	1.00	28.33
	ATOM	3167	CB ASN	462	66.329	23.411	39.604	1.00	30.22
	ATOM	3168	CG ASN	462	67.032	22.196	39.026	1.00	32.38
	ATOM	3169	OD1 ASN	462	67.571	22.245	37.919	1.00	31.35
35	ATOM	3170	ND2 ASN	462	67.043	21.102	39.780	1.00	33.86
	ATOM	3171	C ASN	462	64.200	23.454	38.249	1.00	29.21
	ATOM	3172	O ASN	462	64.074	22.246	38.465	1.00	28.02
	ATOM	3173	N LEU	463	63.227	24.200	37.731	1.00	29.99
	ATOM	3174	CA LEU	463	61.923	23.641	37.394	1.00	32.41
40	ATOM	3175	CB LEU	463	60.809	24.456	38.056	1.00	31.50
	ATOM	3176	CG LEU	463	60.935	24.584	39.579	1.00	31.61
	ATOM	3177	CD1 LEU	463	59.736	25.346	40.125	1.00	30.85
	ATOM	3178	CD2 LEU	463	61.028	23.200	40.214	1.00	30.38
	ATOM	3179	C LEU	463	61.713	23.594	35.886	1.00	34.49
45	ATOM	3180	O LEU	463	60.746	23.011	35.400	1.00	37.47
	ATOM	3181	N LEU	464	62.622	24.223	35.155	1.00	36.34
	ATOM	3182	CA LEU	464	62.580	24.233	33.696	1.00	39.11
	ATOM	3183	CB LEU	464	62.053	25.574	33.163	1.00	39.04
	ATOM	3184	CG LEU	464	60.557	25.635	32.834	1.00	39.75
50	ATOM	3185	CD1 LEU	464	60.214	26.987	32.218	1.00	38.92
	ATOM	3186	CD2 LEU	464	60.208	24.511	31.865	1.00	38.93
	ATOM	3187	C LEU	464	63.987	23.987	33.172	1.00	40.46
	ATOM	3188	O LEU	464	64.966	24.186	33.892	1.00	41.21
	ATOM	3189	N SER	465	64.089	23.546	31.923	1.00	42.64
55	ATOM	3190	CA SER	465	65.390	23.281	31.323	1.00	44.44
	ATOM	3191	CB SER	465	65.500	21.805	30.926	1.00	44.95
	ATOM	3192	OG SER	465	64.454	21.428	30.048	1.00	47.16
	ATOM	3193	C SER	465	65.618	24.166	30.105	1.00	44.78
	ATOM	3194	O SER	465	66.208	25.243	30.212	1.00	45.25
60	ATOM	3195	N GLY	470	64.492	32.666	21.953	1.00	45.58
	ATOM	3196	CA GLY	470	63.932	31.868	20.878	1.00	45.90

	ATOM	3198	C	GLY	470	62.479	32.197	591	1.00	45.14
	ATOM	3198	O	GLY	470	61.641	32.185	21.493	1.00	45.19
	ATOM	3199	N	ALA	471	62.180	32.479	19.327	1.00	44.31
	ATOM	3200	CA	ALA	471	60.829	32.832	18.904	1.00	42.77
5	ATOM	3201	CB	ALA	471	60.801	33.040	17.399	1.00	42.61
	ATOM	3202	C	ALA	471	59.772	31.807	19.307	1.00	41.97
	ATOM	3203	O	ALA	471	58.822	32.140	20.017	1.00	42.12
	ATOM	3204	N	GLU	472	59.933	30.567	18.855	1.00	40.07
	ATOM	3205	CA	GLU	472	58.974	29.515	19.168	1.00	38.02
10	ATOM	3206	CB	GLU	472	59.369	28.213	18.471	1.00	38.51
	ATOM	3207	CG	GLU	472	58.968	28.190	17.001	1.00	39.98
	ATOM	3208	CD	GLU	472	59.374	26.913	16.293	1.00	40.39
	ATOM	3209	OE1	GLU	472	59.651	25.908	16.982	1.00	39.63
	ATOM	3210	OE2	GLU	472	59.397	26.915	15.043	1.00	40.40
15	ATOM	3211	C	GLU	472	58.790	29.276	20.660	1.00	37.16
	ATOM	3212	O	GLU	472	57.703	28.901	21.105	1.00	34.83
	ATOM	3213	N	HIS	473	59.847	29.487	21.435	1.00	35.29
	ATOM	3214	CA	HIS	473	59.740	29.305	22.872	1.00	35.03
	ATOM	3215	CB	HIS	473	61.123	29.172	23.510	1.00	37.48
20	ATOM	3216	CG	HIS	473	61.817	27.889	23.179	1.00	40.71
	ATOM	3217	CD2	HIS	473	61.971	26.749	23.894	1.00	41.63
	ATOM	3218	ND1	HIS	473	62.435	27.665	21.967	1.00	41.83
	ATOM	3219	CE1	HIS	473	62.939	26.444	21.951	1.00	42.38
	ATOM	3220	NE2	HIS	473	62.671	25.866	23.109	1.00	42.85
25	ATOM	3221	C	HIS	473	58.993	30.497	23.464	1.00	33.66
	ATOM	3222	O	HIS	473	58.305	30.361	24.474	1.00	33.56
	ATOM	3223	N	ASP	474	59.129	31.660	22.829	1.00	31.69
	ATOM	3224	CA	ASP	474	58.448	32.864	23.289	1.00	31.39
	ATOM	3225	CB	ASP	474	58.886	34.096	22.488	1.00	33.71
30	ATOM	3226	CG	ASP	474	60.219	34.644	22.939	1.00	36.85
	ATOM	3227	OD1	ASP	474	60.417	34.795	24.163	1.00	38.01
	ATOM	3228	OD2	ASP	474	61.063	34.939	22.065	1.00	40.28
	ATOM	3229	C	ASP	474	56.943	32.705	23.131	1.00	28.93
	ATOM	3230	O	ASP	474	56.182	33.000	24.054	1.00	27.31
35	ATOM	3231	N	ILE	475	56.525	32.252	21.950	1.00	25.74
	ATOM	3232	CA	ILE	475	55.110	32.059	21.658	1.00	21.87
	ATOM	3233	CB	ILE	475	54.893	31.631	20.183	1.00	21.83
	ATOM	3234	CG2	ILE	475	53.398	31.481	19.887	1.00	18.55
	ATOM	3235	CG1	ILE	475	55.498	32.680	19.244	1.00	20.20
40	ATOM	3236	CD1	ILE	475	54.942	34.083	19.432	1.00	18.72
	ATOM	3237	C	ILE	475	54.522	31.009	22.591	1.00	20.48
	ATOM	3238	O	ILE	475	53.405	31.171	23.081	1.00	19.85
	ATOM	3239	N	ASN	476	55.270	29.937	22.844	1.00	18.44
	ATOM	3240	CA	ASN	476	54.795	28.894	23.746	1.00	19.25
45	ATOM	3241	CB	ASN	476	55.788	27.727	23.817	1.00	20.64
	ATOM	3242	CG	ASN	476	55.621	26.738	22.670	1.00	22.25
	ATOM	3243	OD1	ASN	476	54.645	26.785	21.917	1.00	19.60
	ATOM	3244	ND2	ASN	476	56.575	25.822	22.546	1.00	20.31
	ATOM	3245	C	ASN	476	54.598	29.475	25.151	1.00	18.68
50	ATOM	3246	O	ASN	476	53.601	29.183	25.816	1.00	17.02
	ATOM	3247	N	PHE	477	55.554	30.288	25.598	1.00	15.56
	ATOM	3248	CA	PHE	477	55.474	30.913	26.918	1.00	15.68
	ATOM	3249	CB	PHE	477	56.779	31.646	27.248	1.00	14.76
	ATOM	3250	CG	PHE	477	56.688	32.527	28.465	1.00	14.35
55	ATOM	3251	CD1	PHE	477	56.384	31.987	29.711	1.00	15.03
	ATOM	3252	CD2	PHE	477	56.901	33.898	28.365	1.00	13.50
	ATOM	3253	CE1	PHE	477	56.294	32.798	30.841	1.00	14.00
	ATOM	3254	CE2	PHE	477	56.813	34.720	29.488	1.00	15.93
	ATOM	3255	CZ	PHE	477	56.509	34.167	30.730	1.00	14.91
60	ATOM	3256	C	PHE	477	54.318	31.908	26.980	1.00	14.40
	ATOM	3257	O	PHE	477	53.541	31.917	27.935	1.00	13.41

	ATOM	3258	LEU	478	54.220	32.758	25.917	1.00	14.15	
	ATOM	3259	CA	LEU	478	53.155	33.750	25.917	1.00	14.48
	ATOM	3260	CB	LEU	478	53.317	34.647	24.688	1.00	12.70
	ATOM	3261	CG	LEU	478	54.454	35.664	24.818	1.00	13.21
5	ATOM	3262	CD1	LEU	478	54.637	36.396	23.508	1.00	13.86
	ATOM	3263	CD2	LEU	478	54.137	36.649	25.946	1.00	14.40
	ATOM	3264	C	LEU	478	51.792	33.071	25.904	1.00	13.02
	ATOM	3265	O	LEU	478	50.833	33.585	26.476	1.00	11.74
	ATOM	3266	N	MET	479	51.708	31.915	25.253	1.00	13.08
10	ATOM	3267	CA	MET	479	50.448	31.183	25.199	1.00	14.20
	ATOM	3268	CB	MET	479	50.547	29.989	24.242	1.00	14.09
	ATOM	3269	CG	MET	479	49.301	29.106	24.220	1.00	13.18
	ATOM	3270	SD	MET	479	47.788	30.012	23.801	1.00	19.98
	ATOM	3271	CE	MET	479	48.041	30.307	22.061	1.00	13.75
15	ATOM	3272	C	MET	479	50.105	30.688	26.599	1.00	14.85
	ATOM	3273	O	MET	479	48.958	30.778	27.035	1.00	14.35
	ATOM	3274	N	LYS	480	51.102	30.165	27.304	1.00	15.49
	ATOM	3275	CA	LYS	480	50.868	29.669	28.648	1.00	17.00
	ATOM	3276	CB	LYS	480	52.136	29.016	29.221	1.00	19.28
20	ATOM	3277	CG	LYS	480	51.911	28.409	30.600	1.00	26.30
	ATOM	3278	CD	LYS	480	52.934	27.329	30.981	1.00	32.36
	ATOM	3279	CE	LYS	480	54.279	27.910	31.400	1.00	35.11
	ATOM	3280	NZ	LYS	480	55.168	26.878	32.033	1.00	35.89
	ATOM	3281	C	LYS	480	50.395	30.804	29.553	1.00	14.63
25	ATOM	3282	O	LYS	480	49.513	30.613	30.386	1.00	16.02
	ATOM	3283	N	MET	481	50.971	31.988	29.374	1.00	13.07
	ATOM	3284	CA	MET	481	50.602	33.147	30.178	1.00	12.02
	ATOM	3285	CB	MET	481	51.612	34.282	29.976	1.00	12.55
	ATOM	3286	CG	MET	481	53.015	33.998	30.509	1.00	11.44
30	ATOM	3287	SD	MET	481	53.051	33.565	32.265	1.00	18.83
	ATOM	3288	CE	MET	481	52.416	35.085	33.001	1.00	12.30
	ATOM	3289	C	MET	481	49.202	33.644	29.821	1.00	12.65
	ATOM	3290	O	MET	481	48.430	34.045	30.696	1.00	12.46
	ATOM	3291	N	ALA	482	48.886	33.619	28.531	1.00	10.95
35	ATOM	3292	CA	ALA	482	47.588	34.067	28.046	1.00	11.63
	ATOM	3293	CB	ALA	482	47.596	34.125	26.530	1.00	11.09
	ATOM	3294	C	ALA	482	46.463	33.152	28.524	1.00	13.21
	ATOM	3295	O	ALA	482	45.372	33.620	28.861	1.00	10.82
	ATOM	3296	N	LEU	483	46.722	31.848	28.538	1.00	11.90
40	ATOM	3297	CA	LEU	483	45.712	30.897	28.978	1.00	14.01
	ATOM	3298	CB	LEU	483	46.260	29.468	28.910	1.00	11.66
	ATOM	3299	CG	LEU	483	46.455	28.896	27.498	1.00	10.77
	ATOM	3300	CD1	LEU	483	47.098	27.517	27.587	1.00	8.72
	ATOM	3301	CD2	LEU	483	45.118	28.813	26.785	1.00	7.73
45	ATOM	3302	C	LEU	483	45.268	31.232	30.401	1.00	14.37
	ATOM	3303	O	LEU	483	44.158	30.898	30.814	1.00	14.12
	ATOM	3304	N	ASP	484	46.142	31.894	31.147	1.00	15.19
	ATOM	3305	CA	ASP	484	45.810	32.281	32.511	1.00	17.15
	ATOM	3306	CB	ASP	484	47.038	32.146	33.416	1.00	19.74
50	ATOM	3307	CG	ASP	484	46.787	32.653	34.830	1.00	26.92
	ATOM	3308	OD1	ASP	484	45.717	32.353	35.399	1.00	31.69
	ATOM	3309	OD2	ASP	484	47.667	33.344	35.383	1.00	30.93
	ATOM	3310	C	ASP	484	45.271	33.711	32.560	1.00	16.03
	ATOM	3311	O	ASP	484	44.101	33.927	32.860	1.00	17.57
55	ATOM	3312	N	LYS	485	46.119	34.676	32.217	1.00	14.15
	ATOM	3313	CA	LYS	485	45.772	36.094	32.265	1.00	12.86
	ATOM	3314	CB	LYS	485	47.042	36.932	32.080	1.00	12.78
	ATOM	3315	CG	LYS	485	48.152	36.589	33.070	1.00	13.51
	ATOM	3316	CD	LYS	485	47.721	36.847	34.509	1.00	13.07
60	ATOM	3317	CE	LYS	485	48.838	36.502	35.488	1.00	14.28
	ATOM	3318	NZ	LYS	485	48.482	36.832	36.899	1.00	12.83

	ATOM	3320	C	LYS	485	44.690	36.616	31.9	1.00	12.35
	ATOM	3320	O	LYS	485	43.823	37.382	31.739	1.00	12.38
	ATOM	3321	N	ILE	486	44.744	36.233	30.047	1.00	11.02
	ATOM	3322	CA	ILE	486	43.753	36.707	29.084	1.00	11.30
5	ATOM	3323	CB	ILE	486	44.243	36.506	27.632	1.00	10.39
	ATOM	3324	CG2	ILE	486	43.126	36.849	26.649	1.00	9.22
	ATOM	3325	CG1	ILE	486	45.487	37.366	27.376	1.00	9.66
	ATOM	3326	CD1	ILE	486	45.269	38.863	27.555	1.00	12.52
	ATOM	3327	C	ILE	486	42.400	36.016	29.255	1.00	10.85
10	ATOM	3328	O	ILE	486	41.354	36.664	29.228	1.00	9.72
	ATOM	3329	N	ALA	487	42.418	34.700	29.433	1.00	11.32
	ATOM	3330	CA	ALA	487	41.176	33.954	29.610	1.00	10.28
	ATOM	3331	CB	ALA	487	41.484	32.464	29.773	1.00	9.81
	ATOM	3332	C	ALA	487	40.390	34.462	30.823	1.00	10.73
15	ATOM	3333	O	ALA	487	39.161	34.432	30.836	1.00	11.37
	ATOM	3334	N	PHE	488	41.110	34.937	31.834	1.00	10.32
	ATOM	3335	CA	PHE	488	40.500	35.426	33.067	1.00	11.62
	ATOM	3336	CB	PHE	488	41.574	35.560	34.149	1.00	11.67
	ATOM	3337	CG	PHE	488	41.027	35.846	35.523	1.00	14.14
20	ATOM	3338	CD1	PHE	488	40.310	34.873	36.222	1.00	13.10
	ATOM	3339	CD2	PHE	488	41.256	37.075	36.134	1.00	13.14
	ATOM	3340	CE1	PHE	488	39.834	35.122	37.510	1.00	13.40
	ATOM	3341	CE2	PHE	488	40.788	37.332	37.414	1.00	11.72
	ATOM	3342	CZ	PHE	488	40.076	36.355	38.107	1.00	13.66
25	ATOM	3343	C	PHE	488	39.765	36.763	32.931	1.00	11.30
	ATOM	3344	O	PHE	488	38.809	37.022	33.662	1.00	10.92
	ATOM	3345	N	ILE	489	40.208	37.604	32.000	1.00	11.64
	ATOM	3346	CA	ILE	489	39.600	38.915	31.807	1.00	10.62
	ATOM	3347	CB	ILE	489	40.193	39.615	30.568	1.00	12.52
30	ATOM	3348	CG2	ILE	489	39.378	40.870	30.215	1.00	11.83
	ATOM	3349	CG1	ILE	489	41.652	39.993	30.842	1.00	14.27
	ATOM	3350	CD1	ILE	489	41.824	41.029	31.952	1.00	13.73
	ATOM	3351	C	ILE	489	38.067	38.919	31.723	1.00	12.80
	ATOM	3352	O	ILE	489	37.406	39.590	32.514	1.00	12.29
35	ATOM	3353	N	PRO	490	37.482	38.183	30.764	1.00	11.12
	ATOM	3354	CD	PRO	490	38.069	37.429	29.644	1.00	10.46
	ATOM	3355	CA	PRO	490	36.020	38.185	30.683	1.00	10.14
	ATOM	3356	CB	PRO	490	35.742	37.410	29.390	1.00	10.83
	ATOM	3357	CG	PRO	490	36.942	36.516	29.258	1.00	12.17
40	ATOM	3358	C	PRO	490	35.325	37.586	31.911	1.00	9.58
	ATOM	3359	O	PRO	490	34.257	38.049	32.306	1.00	8.62
	ATOM	3360	N	PHE	491	35.925	36.568	32.521	1.00	6.98
	ATOM	3361	CA	PHE	491	35.321	35.969	33.709	1.00	9.75
	ATOM	3362	CB	PHE	491	36.067	34.703	34.137	1.00	8.88
45	ATOM	3363	CG	PHE	491	35.512	34.074	35.393	1.00	9.15
	ATOM	3364	CD1	PHE	491	34.374	33.271	35.344	1.00	8.95
	ATOM	3365	CD2	PHE	491	36.109	34.311	36.630	1.00	7.55
	ATOM	3366	CE1	PHE	491	33.837	32.713	36.508	1.00	9.82
	ATOM	3367	CE2	PHE	491	35.580	33.757	37.803	1.00	9.83
50	ATOM	3368	CZ	PHE	491	34.442	32.957	37.740	1.00	8.83
	ATOM	3369	C	PHE	491	35.329	36.948	34.885	1.00	9.97
	ATOM	3370	O	PHE	491	34.312	37.127	35.558	1.00	10.66
	ATOM	3371	N	SER	492	36.475	37.579	35.132	1.00	9.34
	ATOM	3372	CA	SER	492	36.589	38.512	36.249	1.00	11.14
55	ATOM	3373	CB	SER	492	38.046	38.946	36.439	1.00	8.12
	ATOM	3374	OG	SER	492	38.534	39.643	35.307	1.00	11.50
	ATOM	3375	C	SER	492	35.692	39.738	36.083	1.00	11.76
	ATOM	3376	O	SER	492	35.327	40.391	37.064	1.00	13.67
	ATOM	3377	N	TYR	493	35.344	40.042	34.840	1.00	11.79
60	ATOM	3378	CA	TYR	493	34.482	41.177	34.527	1.00	12.20
	ATOM	3379	CB	TYR	493	34.633	41.544	33.048	1.00	12.22

	ATOM	3380	TYR	493	33.904	42.801	32.8	1.00	13.21
	ATOM	3381	CD1 TYR	493	34.295	44.045	33.134	1.00	14.67
	ATOM	3382	CE1 TYR	493	33.630	45.210	32.763	1.00	16.44
	ATOM	3383	CD2 TYR	493	32.821	42.751	31.764	1.00	13.82
5	ATOM	3384	CE2 TYR	493	32.150	43.912	31.385	1.00	16.41
	ATOM	3385	CZ TYR	493	32.561	45.137	31.889	1.00	15.04
	ATOM	3386	OH TYR	493	31.912	46.285	31.510	1.00	14.56
	ATOM	3387	C TYR	493	33.022	40.811	34.793	1.00	13.05
	ATOM	3388	O TYR	493	32.254	41.585	35.363	1.00	13.30
10	ATOM	3389	N LEU	494	32.670	39.604	34.372	1.00	13.45
	ATOM	3390	CA LEU	494	31.327	39.053	34.475	1.00	13.55
	ATOM	3391	CB LEU	494	31.319	37.739	33.685	1.00	16.41
	ATOM	3392	CG LEU	494	30.282	36.622	33.731	1.00	20.60
	ATOM	3393	CD1 LEU	494	30.701	35.590	32.689	1.00	21.31
15	ATOM	3394	CD2 LEU	494	30.192	35.977	35.100	1.00	15.36
	ATOM	3395	C LEU	494	30.741	38.834	35.874	1.00	11.95
	ATOM	3396	O LEU	494	29.566	39.112	36.102	1.00	11.20
	ATOM	3397	N VAL	495	31.544	38.347	36.810	1.00	10.36
	ATOM	3398	CA VAL	495	31.019	38.055	38.141	1.00	10.58
20	ATOM	3399	CB VAL	495	32.139	37.621	39.109	1.00	9.66
	ATOM	3400	CG1 VAL	495	31.549	37.318	40.486	1.00	9.24
	ATOM	3401	CG2 VAL	495	32.833	36.376	38.564	1.00	12.37
	ATOM	3402	C VAL	495	30.197	39.171	38.785	1.00	9.62
	ATOM	3403	O VAL	495	29.047	38.955	39.154	1.00	7.39
25	ATOM	3404	N ASP	496	30.768	40.360	38.919	1.00	9.30
	ATOM	3405	CA ASP	496	30.012	41.435	39.538	1.00	10.89
	ATOM	3406	CB ASP	496	30.954	42.439	40.207	1.00	10.57
	ATOM	3407	CG ASP	496	31.513	41.909	41.526	1.00	9.77
	ATOM	3408	OD1 ASP	496	31.025	40.855	41.993	1.00	9.79
30	ATOM	3409	OD2 ASP	496	32.426	42.532	42.098	1.00	9.45
	ATOM	3410	C ASP	496	29.015	42.125	38.609	1.00	11.41
	ATOM	3411	O ASP	496	28.125	42.837	39.081	1.00	11.26
	ATOM	3412	N GLN	497	29.143	41.923	37.298	1.00	9.61
	ATOM	3413	CA GLN	497	28.150	42.511	36.400	1.00	11.24
35	ATOM	3414	CB GLN	497	28.471	42.231	34.926	1.00	11.55
	ATOM	3415	CG GLN	497	29.702	42.954	34.377	1.00	13.89
	ATOM	3416	CD GLN	497	29.672	44.459	34.613	1.00	16.12
	ATOM	3417	OE1 GLN	497	28.615	45.082	34.607	1.00	14.20
	ATOM	3418	NE2 GLN	497	30.844	45.048	34.809	1.00	17.36
40	ATOM	3419	C GLN	497	26.847	41.804	36.787	1.00	10.45
	ATOM	3420	O GLN	497	25.774	42.403	36.794	1.00	10.85
	ATOM	3421	N TRP	498	26.961	40.520	37.120	1.00	9.86
	ATOM	3422	CA TRP	498	25.812	39.717	37.537	1.00	10.64
	ATOM	3423	CB TRP	498	26.189	38.231	37.571	1.00	9.73
45	ATOM	3424	CG TRP	498	25.057	37.318	37.978	1.00	9.08
	ATOM	3425	CD2 TRP	498	24.815	36.788	39.287	1.00	9.94
	ATOM	3426	CE2 TRP	498	23.634	36.009	39.213	1.00	11.43
	ATOM	3427	CE3 TRP	498	25.480	36.898	40.518	1.00	9.53
	ATOM	3428	CD1 TRP	498	24.044	36.851	37.182	1.00	10.54
50	ATOM	3429	NE1 TRP	498	23.185	36.063	37.919	1.00	9.96
	ATOM	3430	CZ2 TRP	498	23.105	35.343	40.325	1.00	10.04
	ATOM	3431	CZ3 TRP	498	24.950	36.232	41.629	1.00	13.16
	ATOM	3432	CH2 TRP	498	23.773	35.465	41.520	1.00	12.54
	ATOM	3433	C TRP	498	25.333	40.151	38.928	1.00	9.68
55	ATOM	3434	O TRP	498	24.146	40.398	39.132	1.00	10.04
	ATOM	3435	N ARG	499	26.252	40.243	39.885	1.00	10.21
	ATOM	3436	CA ARG	499	25.871	40.643	41.240	1.00	11.86
	ATOM	3437	CB ARG	499	27.038	40.468	42.222	1.00	11.07
	ATOM	3438	CG ARG	499	27.106	39.070	42.824	1.00	12.83
60	ATOM	3439	CD ARG	499	27.992	39.005	44.062	1.00	12.47
	ATOM	3440	NE ARG	499	29.395	39.250	43.748	1.00	10.15

	ATOM	3441	CZ	ARG	499	30.409	38.744	43.439	1.00	12.88
	ATOM	3442	NH1	ARG	499	30.171	37.961	45.491	1.00	10.18
	ATOM	3443	NH2	ARG	499	31.657	39.000	44.067	1.00	10.68
	ATOM	3444	C	ARG	499	25.325	42.065	41.336	1.00	12.18
5	ATOM	3445	O	ARG	499	24.395	42.311	42.098	1.00	11.36
	ATOM	3446	N	TRP	500	25.887	42.996	40.568	1.00	11.77
	ATOM	3447	CA	TRP	500	25.391	44.368	40.605	1.00	12.08
	ATOM	3448	CB	TRP	500	26.202	45.289	39.684	1.00	10.66
	ATOM	3449	CG	TRP	500	27.602	45.521	40.139	1.00	10.40
10	ATOM	3450	CD2	TRP	500	28.677	46.051	39.357	1.00	11.41
	ATOM	3451	CE2	TRP	500	29.821	46.074	40.183	1.00	11.19
	ATOM	3452	CE3	TRP	500	28.786	46.504	38.034	1.00	11.44
	ATOM	3453	CD1	TRP	500	28.119	45.261	41.374	1.00	9.78
	ATOM	3454	NE1	TRP	500	29.451	45.589	41.409	1.00	10.36
15	ATOM	3455	CZ2	TRP	500	31.062	46.536	39.731	1.00	10.56
	ATOM	3456	CZ3	TRP	500	30.021	46.963	37.585	1.00	11.49
	ATOM	3457	CH2	TRP	500	31.143	46.972	38.434	1.00	9.70
	ATOM	3458	C	TRP	500	23.933	44.407	40.174	1.00	13.08
	ATOM	3459	O	TRP	500	23.143	45.188	40.703	1.00	12.40
20	ATOM	3460	N	ARG	501	23.581	43.565	39.207	1.00	11.92
	ATOM	3461	CA	ARG	501	22.209	43.525	38.719	1.00	12.19
	ATOM	3462	CB	ARG	501	22.176	42.962	37.298	1.00	13.67
	ATOM	3463	CG	ARG	501	22.833	43.881	36.281	1.00	17.51
	ATOM	3464	CD	ARG	501	22.956	43.199	34.929	1.00	23.14
25	ATOM	3465	NE	ARG	501	21.650	42.807	34.407	1.00	28.87
	ATOM	3466	CZ	ARG	501	21.443	41.731	33.656	1.00	30.18
	ATOM	3467	NH1	ARG	501	22.458	40.936	33.340	1.00	30.67
	ATOM	3468	NH2	ARG	501	20.222	41.448	33.223	1.00	31.24
	ATOM	3469	C	ARG	501	21.296	42.732	39.653	1.00	10.77
30	ATOM	3470	O	ARG	501	20.081	42.891	39.626	1.00	10.89
	ATOM	3471	N	VAL	502	21.884	41.865	40.468	1.00	9.90
	ATOM	3472	CA	VAL	502	21.100	41.120	41.439	1.00	10.52
	ATOM	3473	CB	VAL	502	21.896	39.940	42.034	1.00	9.49
	ATOM	3474	CG1	VAL	502	21.205	39.425	43.285	1.00	8.80
35	ATOM	3475	CG2	VAL	502	22.008	38.812	41.002	1.00	12.29
	ATOM	3476	C	VAL	502	20.786	42.126	42.551	1.00	12.15
	ATOM	3477	O	VAL	502	19.643	42.245	42.999	1.00	10.37
	ATOM	3478	N	PHE	503	21.815	42.865	42.965	1.00	11.50
	ATOM	3479	CA	PHE	503	21.678	43.864	44.018	1.00	11.51
40	ATOM	3480	CB	PHE	503	23.057	44.434	44.386	1.00	10.31
	ATOM	3481	CG	PHE	503	23.939	43.463	45.144	1.00	11.73
	ATOM	3482	CD1	PHE	503	25.324	43.571	45.085	1.00	11.85
	ATOM	3483	CD2	PHE	503	23.384	42.451	45.925	1.00	12.62
	ATOM	3484	CE1	PHE	503	26.146	42.693	45.787	1.00	10.68
45	ATOM	3485	CE2	PHE	503	24.199	41.564	46.633	1.00	10.51
	ATOM	3486	CZ	PHE	503	25.582	41.686	46.563	1.00	12.31
	ATOM	3487	C	PHE	503	20.711	44.995	43.661	1.00	10.96
	ATOM	3488	O	PHE	503	19.896	45.384	44.497	1.00	9.00
	ATOM	3489	N	ASP	504	20.779	45.519	42.435	1.00	12.29
50	ATOM	3490	CA	ASP	504	19.866	46.599	42.058	1.00	12.07
	ATOM	3491	CB	ASP	504	20.451	47.479	40.931	1.00	13.57
	ATOM	3492	CG	ASP	504	20.413	46.822	39.548	1.00	13.98
	ATOM	3493	OD1	ASP	504	19.775	45.766	39.358	1.00	14.51
	ATOM	3494	OD2	ASP	504	21.033	47.396	38.633	1.00	15.18
55	ATOM	3495	C	ASP	504	18.470	46.107	41.685	1.00	13.54
	ATOM	3496	O	ASP	504	17.615	46.892	41.278	1.00	13.18
	ATOM	3497	N	GLY	505	18.239	44.805	41.833	1.00	14.58
	ATOM	3498	CA	GLY	505	16.929	44.244	41.540	1.00	15.30
	ATOM	3499	C	GLY	505	16.590	43.920	40.095	1.00	16.54
60	ATOM	3500	O	GLY	505	15.457	43.528	39.808	1.00	17.31
	ATOM	3501	N	SER	506	17.547	44.088	39.185	1.00	15.04

	ATOM	3502	SER	506	17.324	43.793	37.100	1.00	15.72	
	ATOM	3503	CB	SER	506	18.498	44.294	36.925	1.00	15.59
	ATOM	3504	OG	SER	506	18.587	45.701	36.956	1.00	22.52
	ATOM	3505	C	SER	506	17.167	42.292	37.541	1.00	15.40
5	ATOM	3506	O	SER	506	16.505	41.869	36.594	1.00	15.35
	ATOM	3507	N	ILE	507	17.797	41.496	38.401	1.00	13.34
	ATOM	3508	CA	ILE	507	17.731	40.041	38.303	1.00	13.69
	ATOM	3509	CB	ILE	507	19.148	39.426	38.171	1.00	14.13
	ATOM	3510	CG2	ILE	507	19.057	37.904	38.086	1.00	11.80
10	ATOM	3511	CG1	ILE	507	19.858	40.002	36.939	1.00	11.87
	ATOM	3512	CD1	ILE	507	21.333	39.646	36.867	1.00	10.97
	ATOM	3513	C	ILE	507	17.082	39.496	39.574	1.00	14.19
	ATOM	3514	O	ILE	507	17.602	39.698	40.669	1.00	13.99
	ATOM	3515	N	THR	508	15.946	38.815	39.428	1.00	13.82
15	ATOM	3516	CA	THR	508	15.237	38.239	40.573	1.00	13.91
	ATOM	3517	CB	THR	508	13.707	38.241	40.364	1.00	14.70
	ATOM	3518	OG1	THR	508	13.358	37.257	39.381	1.00	15.53
	ATOM	3519	CG2	THR	508	13.232	39.606	39.894	1.00	13.66
	ATOM	3520	C	THR	508	15.678	36.794	40.736	1.00	14.81
20	ATOM	3521	O	THR	508	16.327	36.241	39.846	1.00	11.64
	ATOM	3522	N	LYS	509	15.310	36.176	41.858	1.00	15.94
	ATOM	3523	CA	LYS	509	15.694	34.790	42.106	1.00	17.89
	ATOM	3524	CB	LYS	509	15.249	34.334	43.502	1.00	18.63
	ATOM	3525	CG	LYS	509	13.769	33.992	43.637	1.00	20.95
25	ATOM	3526	CD	LYS	509	13.463	33.460	45.033	1.00	21.83
	ATOM	3527	CE	LYS	509	11.988	33.146	45.204	1.00	23.26
	ATOM	3528	NZ	LYS	509	11.687	32.724	46.600	1.00	23.66
	ATOM	3529	C	LYS	509	15.109	33.854	41.057	1.00	18.81
	ATOM	3530	O	LYS	509	15.497	32.690	40.979	1.00	20.85
30	ATOM	3531	N	GLU	510	14.171	34.353	40.257	1.00	18.47
	ATOM	3532	CA	GLU	510	13.574	33.535	39.206	1.00	20.76
	ATOM	3533	CB	GLU	510	12.282	34.163	38.696	1.00	22.98
	ATOM	3534	CG	GLU	510	11.274	34.507	39.761	1.00	33.06
	ATOM	3535	CD	GLU	510	10.120	35.306	39.196	1.00	36.53
35	ATOM	3536	OE1	GLU	510	10.366	36.379	38.599	1.00	39.46
	ATOM	3537	OE2	GLU	510	8.971	34.859	39.349	1.00	39.85
	ATOM	3538	C	GLU	510	14.536	33.437	38.025	1.00	20.25
	ATOM	3539	O	GLU	510	14.526	32.452	37.283	1.00	19.03
	ATOM	3540	N	ASN	511	15.365	34.465	37.862	1.00	17.63
40	ATOM	3541	CA	ASN	511	16.298	34.522	36.746	1.00	17.82
	ATOM	3542	CB	ASN	511	15.984	35.756	35.891	1.00	19.14
	ATOM	3543	CG	ASN	511	14.541	35.779	35.410	1.00	25.49
	ATOM	3544	OD1	ASN	511	14.080	34.843	34.756	1.00	27.61
	ATOM	3545	ND2	ASN	511	13.819	36.848	35.734	1.00	24.85
45	ATOM	3546	C	ASN	511	17.785	34.510	37.111	1.00	16.09
	ATOM	3547	O	ASN	511	18.630	34.792	36.260	1.00	13.99
	ATOM	3548	N	TYR	512	18.102	34.187	38.363	1.00	12.83
	ATOM	3549	CA	TYR	512	19.494	34.128	38.804	1.00	11.97
	ATOM	3550	CB	TYR	512	19.617	33.360	40.120	1.00	12.23
50	ATOM	3551	CG	TYR	512	19.249	34.090	41.390	1.00	12.34
	ATOM	3552	CD1	TYR	512	19.016	33.370	42.561	1.00	13.62
	ATOM	3553	CE1	TYR	512	18.717	34.007	43.755	1.00	14.61
	ATOM	3554	CD2	TYR	512	19.172	35.484	41.446	1.00	12.45
	ATOM	3555	CE2	TYR	512	18.872	36.137	42.651	1.00	13.77
55	ATOM	3556	CZ	TYR	512	18.647	35.381	43.799	1.00	13.86
	ATOM	3557	OH	TYR	512	18.358	35.977	45.004	1.00	17.23
	ATOM	3558	C	TYR	512	20.385	33.396	37.798	1.00	12.56
	ATOM	3559	O	TYR	512	21.299	33.970	37.199	1.00	10.13
	ATOM	3560	N	ASN	513	20.105	32.108	37.639	1.00	11.91
60	ATOM	3561	CA	ASN	513	20.894	31.247	36.776	1.00	11.83
	ATOM	3562	CB	ASN	513	20.482	29.792	36.985	1.00	11.58

	ATOM	3563	CG	ASN	513	21.672	28.8	36.980	1.00	11.83
	ATOM	3564	OD1	ASN	513	22.613	29.054	37.743	1.00	14.77
	ATOM	3565	ND2	ASN	513	21.644	27.848	36.118	1.00	7.41
	ATOM	3566	C	ASN	513	20.872	31.572	35.299	1.00	12.10
5	ATOM	3567	O	ASN	513	21.918	31.536	34.637	1.00	10.25
	ATOM	3568	N	GLN	514	19.690	31.882	34.775	1.00	11.72
	ATOM	3569	CA	GLN	514	19.568	32.194	33.362	1.00	14.72
	ATOM	3570	CB	GLN	514	18.089	32.356	32.979	1.00	17.46
	ATOM	3571	CG	GLN	514	17.260	31.066	33.144	1.00	23.70
10	ATOM	3572	CD	GLN	514	16.576	30.934	34.510	1.00	25.81
	ATOM	3573	OE1	GLN	514	17.121	31.322	35.552	1.00	21.12
	ATOM	3574	NE2	GLN	514	15.375	30.363	34.502	1.00	29.42
	ATOM	3575	C	GLN	514	20.369	33.446	32.994	1.00	14.10
	ATOM	3576	O	GLN	514	20.973	33.511	31.918	1.00	13.15
15	ATOM	3577	N	GLU	515	20.391	34.432	33.887	1.00	13.07
	ATOM	3578	CA	GLU	515	21.136	35.660	33.615	1.00	12.06
	ATOM	3579	CB	GLU	515	20.656	36.802	34.519	1.00	16.07
	ATOM	3580	CG	GLU	515	19.244	37.290	34.190	1.00	18.59
	ATOM	3581	CD	GLU	515	19.084	37.659	32.719	1.00	24.12
20	ATOM	3582	OE1	GLU	515	19.829	38.544	32.235	1.00	24.75
	ATOM	3583	OE2	GLU	515	18.214	37.060	32.046	1.00	26.20
	ATOM	3584	C	GLU	515	22.626	35.420	33.805	1.00	10.94
	ATOM	3585	O	GLU	515	23.454	36.089	33.190	1.00	12.49
	ATOM	3586	N	TRP	516	22.970	34.466	34.660	1.00	9.41
25	ATOM	3587	CA	TRP	516	24.374	34.135	34.873	1.00	9.43
	ATOM	3588	CB	TRP	516	24.513	33.135	36.030	1.00	9.02
	ATOM	3589	CG	TRP	516	25.865	32.477	36.148	1.00	10.43
	ATOM	3590	CD2	TRP	516	27.026	33.004	36.804	1.00	10.48
	ATOM	3591	CE2	TRP	516	28.037	32.019	36.718	1.00	10.91
30	ATOM	3592	CE3	TRP	516	27.311	34.210	37.458	1.00	10.58
	ATOM	3593	CD1	TRP	516	26.212	31.235	35.697	1.00	11.18
	ATOM	3594	NE1	TRP	516	27.514	30.951	36.038	1.00	12.53
	ATOM	3595	CZ2	TRP	516	29.314	32.201	37.263	1.00	11.44
	ATOM	3596	CZ3	TRP	516	28.583	34.393	38.002	1.00	11.75
35	ATOM	3597	CH2	TRP	516	29.568	33.390	37.899	1.00	11.65
	ATOM	3598	C	TRP	516	24.912	33.542	33.575	1.00	9.00
	ATOM	3599	O	TRP	516	25.971	33.943	33.088	1.00	10.05
	ATOM	3600	N	TRP	517	24.167	32.605	32.993	1.00	9.12
	ATOM	3601	CA	TRP	517	24.609	31.995	31.746	1.00	9.56
40	ATOM	3602	CB	TRP	517	23.855	30.689	31.497	1.00	8.95
	ATOM	3603	CG	TRP	517	24.458	29.614	32.334	1.00	7.44
	ATOM	3604	CD2	TRP	517	25.729	28.992	32.118	1.00	8.27
	ATOM	3605	CE2	TRP	517	25.994	28.176	33.240	1.00	7.79
	ATOM	3606	CE3	TRP	517	26.678	29.052	31.084	1.00	9.26
45	ATOM	3607	CD1	TRP	517	24.007	29.154	33.540	1.00	6.42
	ATOM	3608	NE1	TRP	517	24.927	28.292	34.093	1.00	8.16
	ATOM	3609	CZ2	TRP	517	27.166	27.424	33.359	1.00	9.24
	ATOM	3610	CZ3	TRP	517	27.848	28.301	31.204	1.00	10.00
	ATOM	3611	CH2	TRP	517	28.080	27.500	32.333	1.00	8.75
50	ATOM	3612	C	TRP	517	24.549	32.927	30.538	1.00	10.22
	ATOM	3613	O	TRP	517	25.321	32.769	29.593	1.00	10.24
	ATOM	3614	N	SER	518	23.654	33.908	30.566	1.00	11.02
	ATOM	3615	CA	SER	518	23.588	34.863	29.467	1.00	13.01
	ATOM	3616	CB	SER	518	22.407	35.823	29.631	1.00	14.72
55	ATOM	3617	OG	SER	518	21.187	35.175	29.332	1.00	22.10
	ATOM	3618	C	SER	518	24.887	35.663	29.462	1.00	11.80
	ATOM	3619	O	SER	518	25.375	36.072	28.405	1.00	10.96
	ATOM	3620	N	LEU	519	25.441	35.889	30.650	1.00	10.02
	ATOM	3621	CA	LEU	519	26.685	36.638	30.763	1.00	11.52
60	ATOM	3622	CB	LEU	519	26.828	37.219	32.173	1.00	11.07
	ATOM	3623	CG	LEU	519	25.804	38.316	32.491	1.00	13.05

	ATOM	3624	1	LEU	519	25.934	38.733	33.570	1.00	12.54
	ATOM	3625	CD2	LEU	519	26.017	39.504	31.570	1.00	13.76
	ATOM	3626	C	LEU	519	27.876	35.744	30.430	1.00	11.25
	ATOM	3627	O	LEU	519	28.826	36.179	29.773	1.00	10.48
5	ATOM	3628	N	ARG	520	27.817	34.497	30.887	1.00	10.34
	ATOM	3629	CA	ARG	520	28.875	33.529	30.611	1.00	11.93
	ATOM	3630	CB	ARG	520	28.493	32.160	31.186	1.00	10.95
	ATOM	3631	CG	ARG	520	28.568	32.095	32.713	1.00	10.19
	ATOM	3632	CD	ARG	520	29.973	31.757	33.176	1.00	9.98
10	ATOM	3633	NE	ARG	520	30.136	30.320	33.403	1.00	11.36
	ATOM	3634	CZ	ARG	520	31.303	29.717	33.615	1.00	12.10
	ATOM	3635	NH1	ARG	520	31.342	28.404	33.827	1.00	10.85
	ATOM	3636	NH2	ARG	520	32.432	30.419	33.595	1.00	7.63
	ATOM	3637	C	ARG	520	29.062	33.433	29.097	1.00	12.63
15	ATOM	3638	O	ARG	520	30.186	33.326	28.595	1.00	11.60
	ATOM	3639	N	LEU	521	27.944	33.472	28.378	1.00	11.30
	ATOM	3640	CA	LEU	521	27.957	33.406	26.924	1.00	11.63
	ATOM	3641	CB	LEU	521	26.545	33.129	26.387	1.00	11.64
	ATOM	3642	CG	LEU	521	26.436	33.222	24.858	1.00	14.85
20	ATOM	3643	CD1	LEU	521	27.324	32.153	24.237	1.00	11.78
	ATOM	3644	CD2	LEU	521	24.988	33.049	24.405	1.00	13.95
	ATOM	3645	C	LEU	521	28.460	34.717	26.328	1.00	10.66
	ATOM	3646	O	LEU	521	29.408	34.738	25.554	1.00	12.28
	ATOM	3647	N	LYS	522	27.813	35.811	26.703	1.00	12.13
25	ATOM	3648	CA	LYS	522	28.159	37.127	26.180	1.00	14.27
	ATOM	3649	CB	LYS	522	27.267	38.191	26.826	1.00	16.64
	ATOM	3650	CG	LYS	522	27.524	39.608	26.333	1.00	19.99
	ATOM	3651	CD	LYS	522	26.592	40.589	27.029	1.00	21.89
	ATOM	3652	CE	LYS	522	26.868	42.022	26.602	1.00	24.69
30	ATOM	3653	NZ	LYS	522	25.926	42.969	27.263	1.00	26.36
	ATOM	3654	C	LYS	522	29.620	37.528	26.354	1.00	13.91
	ATOM	3655	O	LYS	522	30.242	38.026	25.418	1.00	13.31
	ATOM	3656	N	TYR	523	30.165	37.314	27.547	1.00	12.72
	ATOM	3657	CA	TYR	523	31.544	37.699	27.820	1.00	13.45
35	ATOM	3658	CB	TYR	523	31.648	38.236	29.254	1.00	14.60
	ATOM	3659	CG	TYR	523	30.942	39.563	29.417	1.00	17.65
	ATOM	3660	CD1	TYR	523	29.840	39.699	30.259	1.00	19.64
	ATOM	3661	CE1	TYR	523	29.146	40.916	30.347	1.00	20.74
	ATOM	3662	CD2	TYR	523	31.340	40.675	28.671	1.00	20.48
40	ATOM	3663	CE2	TYR	523	30.662	41.880	28.752	1.00	20.67
	ATOM	3664	CZ	TYR	523	29.567	41.994	29.587	1.00	21.24
	ATOM	3665	OH	TYR	523	28.890	43.192	29.642	1.00	27.03
	ATOM	3666	C	TYR	523	32.604	36.628	27.576	1.00	13.38
	ATOM	3667	O	TYR	523	33.616	36.899	26.930	1.00	12.98
45	ATOM	3668	N	GLN	524	32.378	35.416	28.072	1.00	11.98
	ATOM	3669	CA	GLN	524	33.355	34.336	27.891	1.00	11.74
	ATOM	3670	CB	GLN	524	33.367	33.425	29.114	1.00	11.09
	ATOM	3671	CG	GLN	524	34.010	34.009	30.338	1.00	9.28
	ATOM	3672	CD	GLN	524	34.003	33.021	31.476	1.00	11.02
50	ATOM	3673	OE1	GLN	524	32.979	32.832	32.135	1.00	12.58
	ATOM	3674	NE2	GLN	524	35.138	32.356	31.696	1.00	7.73
	ATOM	3675	C	GLN	524	33.145	33.459	26.661	1.00	9.96
	ATOM	3676	O	GLN	524	34.057	32.746	26.244	1.00	9.58
	ATOM	3677	N	GLY	525	31.950	33.492	26.085	1.00	11.25
55	ATOM	3678	CA	GLY	525	31.684	32.655	24.927	1.00	10.07
	ATOM	3679	C	GLY	525	31.639	31.190	25.332	1.00	11.60
	ATOM	3680	O	GLY	525	32.148	30.316	24.623	1.00	12.24
	ATOM	3681	N	LEU	526	31.044	30.921	26.489	1.00	9.03
	ATOM	3682	CA	LEU	526	30.928	29.554	26.984	1.00	9.89
60	ATOM	3683	CB	LEU	526	31.560	29.421	28.374	1.00	9.34
	ATOM	3684	CG	LEU	526	33.030	29.805	28.536	1.00	9.90

	ATOM	3685	CD1	LEU	526	33.426	29.727	27.015	1.00	9.26
	ATOM	3686	CD2	LEU	526	33.889	28.888	27.687	1.00	8.55
	ATOM	3687	C	LEU	526	29.470	29.146	27.082	1.00	11.13
	ATOM	3688	O	LEU	526	28.580	29.998	27.174	1.00	11.49
5	ATOM	3689	N	CYS	527	29.235	27.838	27.051	1.00	10.63
	ATOM	3690	CA	CYS	527	27.894	27.288	27.177	1.00	11.97
	ATOM	3691	CB	CYS	527	27.352	26.801	25.815	1.00	10.95
	ATOM	3692	SG	CYS	527	28.394	25.617	24.900	1.00	18.23
	ATOM	3693	C	CYS	527	27.936	26.137	28.173	1.00	10.37
10	ATOM	3694	O	CYS	527	28.964	25.482	28.346	1.00	10.79
	ATOM	3695	N	PRO	528	26.825	25.900	28.876	1.00	11.53
	ATOM	3696	CD	PRO	528	25.563	26.667	28.912	1.00	11.52
	ATOM	3697	CA	PRO	528	26.818	24.800	29.844	1.00	11.48
	ATOM	3698	CB	PRO	528	25.578	25.095	30.689	1.00	10.83
15	ATOM	3699	CG	PRO	528	24.638	25.744	29.689	1.00	12.92
	ATOM	3700	C	PRO	528	26.727	23.472	29.091	1.00	12.66
	ATOM	3701	O	PRO	528	25.890	23.317	28.199	1.00	12.63
	ATOM	3702	N	PRO	529	27.599	22.504	29.426	1.00	11.66
	ATOM	3703	CD	PRO	529	28.616	22.533	30.490	1.00	13.05
20	ATOM	3704	CA	PRO	529	27.585	21.199	28.756	1.00	13.58
	ATOM	3705	CB	PRO	529	28.801	20.496	29.353	1.00	13.06
	ATOM	3706	CG	PRO	529	28.864	21.064	30.732	1.00	12.29
	ATOM	3707	C	PRO	529	26.279	20.448	29.008	1.00	14.96
	ATOM	3708	O	PRO	529	25.888	19.587	28.227	1.00	15.87
25	ATOM	3709	N	VAL	530	25.613	20.787	30.108	1.00	14.85
	ATOM	3710	CA	VAL	530	24.339	20.178	30.463	1.00	16.23
	ATOM	3711	CB	VAL	530	24.449	19.366	31.779	1.00	17.35
	ATOM	3712	CG1	VAL	530	23.070	19.037	32.314	1.00	17.95
	ATOM	3713	CG2	VAL	530	25.222	18.084	31.525	1.00	18.24
30	ATOM	3714	C	VAL	530	23.326	21.306	30.642	1.00	16.73
	ATOM	3715	O	VAL	530	23.589	22.282	31.344	1.00	16.65
	ATOM	3716	N	PRO	531	22.156	21.198	29.996	1.00	16.87
	ATOM	3717	CD	PRO	531	21.626	20.094	29.180	1.00	18.50
	ATOM	3718	CA	PRO	531	21.165	22.269	30.149	1.00	17.92
35	ATOM	3719	CB	PRO	531	19.994	21.785	29.292	1.00	19.57
	ATOM	3720	CG	PRO	531	20.136	20.284	29.328	1.00	21.45
	ATOM	3721	C	PRO	531	20.796	22.473	31.617	1.00	18.39
	ATOM	3722	O	PRO	531	20.591	21.510	32.361	1.00	16.67
	ATOM	3723	N	ARG	532	20.735	23.732	32.039	1.00	17.31
40	ATOM	3724	CA	ARG	532	20.406	24.037	33.423	1.00	18.29
	ATOM	3725	CB	ARG	532	20.853	25.460	33.770	1.00	16.22
	ATOM	3726	CG	ARG	532	22.199	25.856	33.165	1.00	15.05
	ATOM	3727	CD	ARG	532	23.254	24.770	33.337	1.00	15.19
	ATOM	3728	NE	ARG	532	23.590	24.508	34.735	1.00	14.35
45	ATOM	3729	CZ	ARG	532	23.800	23.293	35.228	1.00	15.95
	ATOM	3730	NH1	ARG	532	23.698	22.228	34.433	1.00	13.26
	ATOM	3731	NH2	ARG	532	24.127	23.138	36.506	1.00	12.05
	ATOM	3732	C	ARG	532	18.906	23.883	33.650	1.00	20.23
	ATOM	3733	O	ARG	532	18.105	24.076	32.733	1.00	19.63
50	ATOM	3734	N	THR	533	18.530	23.532	34.876	1.00	21.65
	ATOM	3735	CA	THR	533	17.124	23.340	35.220	1.00	23.17
	ATOM	3736	CB	THR	533	16.819	21.857	35.519	1.00	24.29
	ATOM	3737	OG1	THR	533	17.679	21.393	36.570	1.00	25.97
	ATOM	3738	CG2	THR	533	17.031	21.006	34.277	1.00	25.60
55	ATOM	3739	C	THR	533	16.753	24.153	36.447	1.00	23.60
	ATOM	3740	O	THR	533	17.629	24.635	37.171	1.00	21.92
	ATOM	3741	N	GLN	534	15.452	24.300	36.681	1.00	24.71
	ATOM	3742	CA	GLN	534	14.973	25.052	37.832	1.00	26.41
	ATOM	3743	CB	GLN	534	13.440	25.044	37.872	1.00	28.54
60	ATOM	3744	CG	GLN	534	12.845	25.925	38.964	1.00	33.07
	ATOM	3745	CD	GLN	534	12.569	25.166	40.249	1.00	36.01

	ATOM	3747	OE1	GLN	534	13.114	24.084	41.075	1.00	38.09
	ATOM	3747	NE2	GLN	534	11.722	25.735	41.104	1.00	36.23
	ATOM	3748	C	GLN	534	15.550	24.404	39.087	1.00	25.91
	ATOM	3749	O	GLN	534	15.444	23.192	39.279	1.00	28.56
5	ATOM	3750	N	GLY	535	16.173	25.211	39.936	1.00	24.41
	ATOM	3751	CA	GLY	535	16.775	24.673	41.140	1.00	20.69
	ATOM	3752	C	GLY	535	18.281	24.852	41.105	1.00	18.98
	ATOM	3753	O	GLY	535	18.934	24.861	42.146	1.00	20.39
	ATOM	3754	N	ASP	536	18.842	24.986	39.906	1.00	16.53
10	ATOM	3755	CA	ASP	536	20.281	25.186	39.778	1.00	15.72
	ATOM	3756	CB	ASP	536	20.761	24.930	38.341	1.00	14.56
	ATOM	3757	CG	ASP	536	20.792	23.451	37.980	1.00	15.32
	ATOM	3758	OD1	ASP	536	20.996	22.613	38.883	1.00	16.51
	ATOM	3759	OD2	ASP	536	20.632	23.131	36.784	1.00	15.49
15	ATOM	3760	C	ASP	536	20.635	26.620	40.157	1.00	13.62
	ATOM	3761	O	ASP	536	19.855	27.539	39.930	1.00	15.72
	ATOM	3762	N	PHE	537	21.809	26.794	40.747	1.00	12.29
	ATOM	3763	CA	PHE	537	22.308	28.109	41.139	1.00	11.39
	ATOM	3764	CB	PHE	537	21.913	28.443	42.583	1.00	10.12
20	ATOM	3765	CG	PHE	537	22.366	29.807	43.042	1.00	9.09
	ATOM	3766	CD1	PHE	537	22.014	30.950	42.335	1.00	9.35
	ATOM	3767	CD2	PHE	537	23.151	29.943	44.189	1.00	12.40
	ATOM	3768	CE1	PHE	537	22.433	32.218	42.759	1.00	12.30
	ATOM	3769	CE2	PHE	537	23.578	31.205	44.627	1.00	11.45
25	ATOM	3770	CZ	PHE	537	23.217	32.344	43.908	1.00	12.12
	ATOM	3771	C	PHE	537	23.817	27.983	41.008	1.00	9.37
	ATOM	3772	O	PHE	537	24.548	27.889	41.991	1.00	7.21
	ATOM	3773	N	ASP	538	24.266	27.956	39.762	1.00	11.11
	ATOM	3774	CA	ASP	538	25.675	27.811	39.461	1.00	10.38
30	ATOM	3775	CB	ASP	538	25.853	27.736	37.944	1.00	10.80
	ATOM	3776	CG	ASP	538	25.031	26.605	37.329	1.00	12.13
	ATOM	3777	OD1	ASP	538	24.925	25.533	37.965	1.00	11.88
	ATOM	3778	OD2	ASP	538	24.491	26.778	36.220	1.00	13.46
	ATOM	3779	C	ASP	538	26.567	28.882	40.095	1.00	10.52
35	ATOM	3780	O	ASP	538	27.694	28.590	40.489	1.00	11.65
	ATOM	3781	N	PRO	539	26.079	30.132	40.219	1.00	10.22
	ATOM	3782	CD	PRO	539	24.848	30.756	39.699	1.00	9.12
	ATOM	3783	CA	PRO	539	26.951	31.138	40.841	1.00	10.73
	ATOM	3784	CB	PRO	539	26.076	32.390	40.868	1.00	9.39
40	ATOM	3785	CG	PRO	539	25.233	32.228	39.636	1.00	11.07
	ATOM	3786	C	PRO	539	27.367	30.710	42.254	1.00	11.37
	ATOM	3787	O	PRO	539	28.469	31.021	42.716	1.00	11.84
	ATOM	3788	N	GLY	540	26.472	30.001	42.935	1.00	10.64
	ATOM	3789	CA	GLY	540	26.762	29.551	44.287	1.00	12.15
45	ATOM	3790	C	GLY	540	27.897	28.547	44.348	1.00	11.90
	ATOM	3791	O	GLY	540	28.416	28.254	45.427	1.00	11.97
	ATOM	3792	N	ALA	541	28.285	28.022	43.189	1.00	11.60
	ATOM	3793	CA	ALA	541	29.370	27.048	43.107	1.00	11.56
	ATOM	3794	CB	ALA	541	29.133	26.093	41.931	1.00	13.00
50	ATOM	3795	C	ALA	541	30.737	27.725	42.965	1.00	11.57
	ATOM	3796	O	ALA	541	31.753	27.057	42.760	1.00	11.83
	ATOM	3797	N	LYS	542	30.752	29.052	43.064	1.00	11.43
	ATOM	3798	CA	LYS	542	31.992	29.824	42.984	1.00	11.78
	ATOM	3799	CB	LYS	542	31.891	30.884	41.878	1.00	10.91
55	ATOM	3800	CG	LYS	542	33.109	31.805	41.772	1.00	8.80
	ATOM	3801	CD	LYS	542	34.399	31.022	41.509	1.00	8.48
	ATOM	3802	CE	LYS	542	35.618	31.946	41.540	1.00	8.38
	ATOM	3803	NZ	LYS	542	36.909	31.210	41.407	1.00	9.81
	ATOM	3804	C	LYS	542	32.199	30.484	44.353	1.00	12.26
60	ATOM	3805	O	LYS	542	31.374	31.280	44.803	1.00	11.13
	ATOM	3806	N	PHE	543	33.305	30.137	45.004	1.00	13.11

	ATOM	3808	CA	PHE	543	33.637	30.632	34.343	1.00	13.89
	ATOM	3808	CB	PHE	543	35.152	30.580	46.561	1.00	13.28
	ATOM	3809	CG	PHE	543	35.591	31.133	47.890	1.00	15.40
	ATOM	3810	CD1	PHE	543	35.490	30.363	49.048	1.00	14.58
5	ATOM	3811	CD2	PHE	543	36.082	32.435	47.990	1.00	13.56
	ATOM	3812	CE1	PHE	543	35.873	30.883	50.289	1.00	12.64
	ATOM	3813	CE2	PHE	543	36.465	32.961	49.223	1.00	14.52
	ATOM	3814	CZ	PHE	543	36.360	32.182	50.376	1.00	12.86
	ATOM	3815	C	PHE	543	33.146	32.028	46.734	1.00	13.70
10	ATOM	3816	O	PHE	543	32.413	32.183	47.714	1.00	14.70
	ATOM	3817	N	HIS	544	33.564	33.035	45.973	1.00	11.85
	ATOM	3818	CA	HIS	544	33.230	34.430	46.257	1.00	12.43
	ATOM	3819	CB	HIS	544	33.899	35.330	45.216	1.00	11.22
	ATOM	3820	CG	HIS	544	35.380	35.131	45.129	1.00	12.39
15	ATOM	3821	CD2	HIS	544	36.412	35.944	45.460	1.00	10.77
	ATOM	3822	ND1	HIS	544	35.945	33.952	44.694	1.00	12.50
	ATOM	3823	CE1	HIS	544	37.262	34.045	44.762	1.00	12.26
	ATOM	3824	NE2	HIS	544	37.570	35.243	45.223	1.00	12.30
	ATOM	3825	C	HIS	544	31.754	34.791	46.389	1.00	12.49
20	ATOM	3826	O	HIS	544	31.414	35.774	47.053	1.00	13.33
	ATOM	3827	N	ILE	545	30.880	34.004	45.773	1.00	12.62
	ATOM	3828	CA	ILE	545	29.455	34.278	45.848	1.00	11.82
	ATOM	3829	CB	ILE	545	28.685	33.471	44.772	1.00	12.66
	ATOM	3830	CG2	ILE	545	27.178	33.627	44.955	1.00	11.69
25	ATOM	3831	CG1	ILE	545	29.117	33.943	43.380	1.00	13.17
	ATOM	3832	CD1	ILE	545	28.898	35.423	43.130	1.00	13.67
	ATOM	3833	C	ILE	545	28.926	33.980	47.251	1.00	13.02
	ATOM	3834	O	ILE	545	28.437	34.880	47.933	1.00	12.86
	ATOM	3835	N	PRO	546	29.021	32.719	47.712	1.00	12.59
30	ATOM	3836	CD	PRO	546	29.404	31.462	47.045	1.00	10.20
	ATOM	3837	CA	PRO	546	28.511	32.463	49.064	1.00	11.85
	ATOM	3838	CB	PRO	546	28.527	30.932	49.162	1.00	14.53
	ATOM	3839	CG	PRO	546	29.629	30.530	48.217	1.00	11.49
	ATOM	3840	C	PRO	546	29.346	33.146	50.154	1.00	13.09
35	ATOM	3841	O	PRO	546	28.848	33.420	51.248	1.00	11.43
	ATOM	3842	N	SER	547	30.611	33.433	49.850	1.00	11.87
	ATOM	3843	CA	SER	547	31.488	34.090	50.817	1.00	12.43
	ATOM	3844	CB	SER	547	32.950	33.734	50.550	1.00	14.52
	ATOM	3845	OG	SER	547	33.188	32.370	50.842	1.00	18.88
40	ATOM	3846	C	SER	547	31.332	35.601	50.811	1.00	10.80
	ATOM	3847	O	SER	547	31.946	36.294	51.617	1.00	10.64
	ATOM	3848	N	SER	548	30.515	36.105	49.891	1.00	11.41
	ATOM	3849	CA	SER	548	30.259	37.538	49.777	1.00	11.67
	ATOM	3850	CB	SER	548	29.419	38.020	50.968	1.00	12.24
45	ATOM	3851	OG	SER	548	28.977	39.360	50.781	1.00	11.61
	ATOM	3852	C	SER	548	31.537	38.380	49.669	1.00	13.36
	ATOM	3853	O	SER	548	31.711	39.366	50.396	1.00	13.15
	ATOM	3854	N	VAL	549	32.430	37.978	48.768	1.00	11.75
	ATOM	3855	CA	VAL	549	33.672	38.714	48.529	1.00	11.24
50	ATOM	3856	CB	VAL	549	34.911	37.786	48.533	1.00	11.58
	ATOM	3857	CG1	VAL	549	36.169	38.594	48.199	1.00	10.79
	ATOM	3858	CG2	VAL	549	35.058	37.105	49.888	1.00	12.34
	ATOM	3859	C	VAL	549	33.550	39.347	47.139	1.00	9.01
	ATOM	3860	O	VAL	549	33.356	38.637	46.149	1.00	9.01
55	ATOM	3861	N	PRO	550	33.651	40.687	47.049	1.00	7.69
	ATOM	3862	CD	PRO	550	33.852	41.644	48.152	1.00	8.15
	ATOM	3863	CA	PRO	550	33.547	41.388	45.757	1.00	9.25
	ATOM	3864	CB	PRO	550	33.846	42.841	46.127	1.00	8.76
	ATOM	3865	CG	PRO	550	33.325	42.934	47.551	1.00	8.40
60	ATOM	3866	C	PRO	550	34.546	40.819	44.747	1.00	8.58
	ATOM	3867	O	PRO	550	35.645	40.411	45.122	1.00	8.68

	ATOM	3868	TYR	551	34.179	40.813	43.179	1.00	8.90
	ATOM	3869	CA TYR	551	35.050	40.234	42.452	1.00	8.19
	ATOM	3870	CB TYR	551	34.282	39.168	41.661	1.00	8.98
	ATOM	3871	CG TYR	551	35.155	38.019	41.221	1.00	8.00
5	ATOM	3872	CD1 TYR	551	35.496	37.008	42.119	1.00	7.60
	ATOM	3873	CE1 TYR	551	36.367	35.985	41.759	1.00	8.68
	ATOM	3874	CD2 TYR	551	35.705	37.978	39.935	1.00	8.09
	ATOM	3875	CE2 TYR	551	36.589	36.948	39.562	1.00	8.21
	ATOM	3876	CZ TYR	551	36.913	35.960	40.486	1.00	8.67
10	ATOM	3877	OH TYR	551	37.794	34.955	40.160	1.00	9.65
	ATOM	3878	C TYR	551	35.706	41.182	41.452	1.00	9.16
	ATOM	3879	O TYR	551	36.728	40.839	40.865	1.00	9.22
	ATOM	3880	N ILE	552	35.124	42.358	41.243	1.00	8.84
	ATOM	3881	CA ILE	552	35.676	43.299	40.275	1.00	9.21
15	ATOM	3882	CB ILE	552	34.790	44.576	40.189	1.00	9.04
	ATOM	3883	CG2 ILE	552	35.055	45.494	41.365	1.00	9.74
	ATOM	3884	CG1 ILE	552	35.028	45.280	38.851	1.00	8.56
	ATOM	3885	CD1 ILE	552	34.587	44.457	37.637	1.00	5.07
	ATOM	3886	C ILE	552	37.141	43.652	40.565	1.00	10.06
20	ATOM	3887	O ILE	552	37.892	44.025	39.664	1.00	11.40
	ATOM	3888	N ARG	553	37.549	43.508	41.821	1.00	10.58
	ATOM	3889	CA ARG	553	38.928	43.775	42.217	1.00	9.70
	ATOM	3890	CB ARG	553	39.106	43.467	43.708	1.00	10.44
	ATOM	3891	CG ARG	553	38.642	42.058	44.103	1.00	11.05
25	ATOM	3892	CD ARG	553	38.629	41.861	45.620	1.00	10.48
	ATOM	3893	NE ARG	553	37.815	42.881	46.274	1.00	9.50
	ATOM	3894	CZ ARG	553	37.562	42.928	47.577	1.00	9.87
	ATOM	3895	NH1 ARG	553	38.059	42.002	48.389	1.00	9.94
	ATOM	3896	NH2 ARG	553	36.816	43.909	48.071	1.00	9.97
30	ATOM	3897	C ARG	553	39.910	42.920	41.396	1.00	10.71
	ATOM	3898	O ARG	553	41.049	43.331	41.151	1.00	9.61
	ATOM	3899	N TYR	554	39.468	41.739	40.967	1.00	8.53
	ATOM	3900	CA TYR	554	40.334	40.844	40.195	1.00	10.58
	ATOM	3901	CB TYR	554	39.815	39.401	40.264	1.00	9.50
35	ATOM	3902	CG TYR	554	39.759	38.865	41.679	1.00	10.20
	ATOM	3903	CD1 TYR	554	38.534	38.602	42.297	1.00	9.83
	ATOM	3904	CE1 TYR	554	38.471	38.161	43.620	1.00	9.58
	ATOM	3905	CD2 TYR	554	40.930	38.670	42.421	1.00	9.15
	ATOM	3906	CE2 TYR	554	40.881	38.229	43.747	1.00	8.88
40	ATOM	3907	CZ TYR	554	39.645	37.977	44.339	1.00	10.44
	ATOM	3908	OH TYR	554	39.572	37.561	45.648	1.00	8.38
	ATOM	3909	C TYR	554	40.472	41.286	38.746	1.00	10.64
	ATOM	3910	O TYR	554	41.518	41.083	38.122	1.00	11.41
	ATOM	3911	N PHE	555	39.414	41.884	38.209	1.00	10.46
45	ATOM	3912	CA PHE	555	39.452	42.393	36.842	1.00	10.84
	ATOM	3913	CB PHE	555	38.060	42.855	36.400	1.00	10.26
	ATOM	3914	CG PHE	555	38.046	43.526	35.061	1.00	10.17
	ATOM	3915	CD1 PHE	555	38.027	42.776	33.889	1.00	11.11
	ATOM	3916	CD2 PHE	555	38.081	44.911	34.968	1.00	11.00
50	ATOM	3917	CE1 PHE	555	38.044	43.402	32.641	1.00	10.56
	ATOM	3918	CE2 PHE	555	38.101	45.547	33.723	1.00	11.95
	ATOM	3919	CZ PHE	555	38.083	44.792	32.560	1.00	10.41
	ATOM	3920	C PHE	555	40.417	43.586	36.850	1.00	10.22
	ATOM	3921	O PHE	555	41.309	43.689	36.007	1.00	9.16
55	ATOM	3922	N VAL	556	40.225	44.483	37.810	1.00	8.84
	ATOM	3923	CA VAL	556	41.083	45.652	37.947	1.00	10.41
	ATOM	3924	CB VAL	556	40.657	46.515	39.163	1.00	11.27
	ATOM	3925	CG1 VAL	556	41.651	47.663	39.377	1.00	11.42
	ATOM	3926	CG2 VAL	556	39.256	47.074	38.934	1.00	10.95
60	ATOM	3927	C VAL	556	42.530	45.183	38.135	1.00	10.85
	ATOM	3928	O VAL	556	43.448	45.679	37.485	1.00	9.24

	ATOM	3929	N	SER	557	42.722	44.213	39.021	1.00	10.92
	ATOM	3930	CA	SER	557	44.055	43.681	39.283	1.00	12.23
	ATOM	3931	CB	SER	557	43.986	42.547	40.311	1.00	12.25
	ATOM	3932	OG	SER	557	45.242	41.895	40.418	1.00	11.90
5	ATOM	3933	C	SER	557	44.781	43.167	38.042	1.00	10.88
	ATOM	3934	O	SER	557	45.944	43.491	37.823	1.00	11.61
	ATOM	3935	N	PHE	558	44.108	42.358	37.233	1.00	11.01
	ATOM	3936	CA	PHE	558	44.760	41.805	36.054	1.00	12.87
	ATOM	3937	CB	PHE	558	43.874	40.728	35.419	1.00	13.39
10	ATOM	3938	CG	PHE	558	44.053	39.374	36.041	1.00	14.43
	ATOM	3939	CD1	PHE	558	43.973	39.217	37.425	1.00	16.42
	ATOM	3940	CD2	PHE	558	44.343	38.263	35.254	1.00	14.78
	ATOM	3941	CE1	PHE	558	44.185	37.969	38.017	1.00	16.88
	ATOM	3942	CE2	PHE	558	44.554	37.016	35.830	1.00	15.76
15	ATOM	3943	CZ	PHE	558	44.476	36.868	37.218	1.00	17.97
	ATOM	3944	C	PHE	558	45.191	42.844	35.032	1.00	13.85
	ATOM	3945	O	PHE	558	46.164	42.640	34.308	1.00	12.86
	ATOM	3946	N	ILE	559	44.479	43.963	34.979	1.00	14.42
	ATOM	3947	CA	ILE	559	44.840	45.028	34.051	1.00	13.66
20	ATOM	3948	CB	ILE	559	43.677	46.038	33.853	1.00	14.20
	ATOM	3949	CG2	ILE	559	44.179	47.274	33.112	1.00	12.67
	ATOM	3950	CG1	ILE	559	42.513	45.381	33.098	1.00	15.77
	ATOM	3951	CD1	ILE	559	42.788	45.101	31.635	1.00	17.17
	ATOM	3952	C	ILE	559	46.039	45.796	34.611	1.00	12.63
25	ATOM	3953	O	ILE	559	47.080	45.907	33.964	1.00	12.70
	ATOM	3954	N	ILE	560	45.892	46.304	35.831	1.00	11.72
	ATOM	3955	CA	ILE	560	46.946	47.104	36.441	1.00	10.69
	ATOM	3956	CB	ILE	560	46.436	47.844	37.706	1.00	10.54
	ATOM	3957	CG2	ILE	560	45.153	48.614	37.370	1.00	8.48
30	ATOM	3958	CG1	ILE	560	46.206	46.858	38.854	1.00	8.80
	ATOM	3959	CD1	ILE	560	45.770	47.529	40.158	1.00	8.36
	ATOM	3960	C	ILE	560	48.227	46.355	36.793	1.00	12.09
	ATOM	3961	O	ILE	560	49.296	46.962	36.854	1.00	10.94
	ATOM	3962	N	GLN	561	48.144	45.049	37.023	1.00	10.67
35	ATOM	3963	CA	GLN	561	49.364	44.324	37.354	1.00	11.49
	ATOM	3964	CB	GLN	561	49.060	42.882	37.778	1.00	10.52
	ATOM	3965	CG	GLN	561	48.500	41.975	36.701	1.00	9.92
	ATOM	3966	CD	GLN	561	48.154	40.604	37.254	1.00	12.40
	ATOM	3967	OE1	GLN	561	48.678	39.589	36.799	1.00	11.82
40	ATOM	3968	NE2	GLN	561	47.269	40.571	38.250	1.00	10.71
	ATOM	3969	C	GLN	561	50.341	44.363	36.176	1.00	11.50
	ATOM	3970	O	GLN	561	51.554	44.347	36.372	1.00	11.27
	ATOM	3971	N	PHE	562	49.817	44.424	34.953	1.00	11.69
	ATOM	3972	CA	PHE	562	50.691	44.503	33.790	1.00	11.21
45	ATOM	3973	CB	PHE	562	49.956	44.080	32.510	1.00	11.05
	ATOM	3974	CG	PHE	562	49.863	42.591	32.352	1.00	11.29
	ATOM	3975	CD1	PHE	562	48.793	41.884	32.890	1.00	9.06
	ATOM	3976	CD2	PHE	562	50.913	41.880	31.768	1.00	12.56
	ATOM	3977	CE1	PHE	562	48.772	40.488	32.858	1.00	12.27
50	ATOM	3978	CE2	PHE	562	50.903	40.485	31.732	1.00	12.36
	ATOM	3979	CZ	PHE	562	49.831	39.787	32.280	1.00	11.90
	ATOM	3980	C	PHE	562	51.231	45.925	33.675	1.00	12.75
	ATOM	3981	O	PHE	562	52.351	46.140	33.199	1.00	11.93
	ATOM	3982	N	GLN	563	50.437	46.897	34.117	1.00	10.72
55	ATOM	3983	CA	GLN	563	50.891	48.281	34.097	1.00	12.88
	ATOM	3984	CB	GLN	563	49.767	49.234	34.519	1.00	11.19
	ATOM	3985	CG	GLN	563	48.737	49.532	33.435	1.00	11.49
	ATOM	3986	CD	GLN	563	47.675	50.507	33.912	1.00	12.70
	ATOM	3987	OE1	GLN	563	46.589	50.107	34.331	1.00	12.32
60	ATOM	3988	NE2	GLN	563	47.997	51.799	33.872	1.00	11.50
	ATOM	3989	C	GLN	563	52.047	48.395	35.092	1.00	12.39

	ATOM	3990	GLN	563	53.025	49.093	34.100	1.00	13.44
	ATOM	3991	N PHE	564	51.925	47.706	36.225	1.00	11.63
	ATOM	3992	CA PHE	564	52.963	47.740	37.252	1.00	13.10
	ATOM	3993	CB PHE	564	52.464	47.095	38.554	1.00	11.20
5	ATOM	3994	CG PHE	564	51.333	47.841	39.221	1.00	12.19
	ATOM	3995	CD1 PHE	564	50.907	49.082	38.746	1.00	14.04
	ATOM	3996	CD2 PHE	564	50.687	47.294	40.329	1.00	12.60
	ATOM	3997	CE1 PHE	564	49.852	49.766	39.365	1.00	13.68
	ATOM	3998	CE2 PHE	564	49.634	47.967	40.956	1.00	11.39
10	ATOM	3999	CZ PHE	564	49.215	49.203	40.473	1.00	11.65
	ATOM	4000	C PHE	564	54.216	47.013	36.768	1.00	12.91
	ATOM	4001	O PHE	564	55.333	47.480	36.971	1.00	12.87
	ATOM	4002	N HIS	565	54.019	45.865	36.132	1.00	13.20
	ATOM	4003	CA HIS	565	55.121	45.070	35.599	1.00	14.27
15	ATOM	4004	CB HIS	565	54.560	43.825	34.906	1.00	12.73
	ATOM	4005	CG HIS	565	55.607	42.908	34.354	1.00	15.74
	ATOM	4006	CD2 HIS	565	55.857	42.500	33.086	1.00	12.69
	ATOM	4007	ND1 HIS	565	56.545	42.283	35.148	1.00	14.29
	ATOM	4008	CE1 HIS	565	57.326	41.532	34.394	1.00	14.80
20	ATOM	4009	NE2 HIS	565	56.930	41.647	33.138	1.00	14.33
	ATOM	4010	C HIS	565	55.923	45.920	34.600	1.00	14.86
	ATOM	4011	O HIS	565	57.153	45.973	34.652	1.00	14.50
	ATOM	4012	N GLU	566	55.213	46.593	33.702	1.00	13.69
	ATOM	4013	CA GLU	566	55.848	47.443	32.702	1.00	15.17
25	ATOM	4014	CB GLU	566	54.778	48.065	31.797	1.00	15.39
	ATOM	4015	CG GLU	566	55.313	48.964	30.695	1.00	15.92
	ATOM	4016	CD GLU	566	54.202	49.652	29.931	1.00	15.19
	ATOM	4017	OE1 GLU	566	53.539	50.538	30.505	1.00	17.62
	ATOM	4018	OE2 GLU	566	53.980	49.295	28.758	1.00	18.81
30	ATOM	4019	C GLU	566	56.695	48.551	33.339	1.00	15.89
	ATOM	4020	O GLU	566	57.859	48.737	32.976	1.00	14.18
	ATOM	4021	N ALA	567	56.112	49.282	34.287	1.00	15.39
	ATOM	4022	CA ALA	567	56.828	50.372	34.948	1.00	16.88
	ATOM	4023	CB ALA	567	55.865	51.183	35.819	1.00	14.89
35	ATOM	4024	C ALA	567	58.019	49.897	35.784	1.00	16.62
	ATOM	4025	O ALA	567	59.096	50.488	35.727	1.00	15.99
	ATOM	4026	N LEU	568	57.825	48.833	36.557	1.00	15.41
	ATOM	4027	CA LEU	568	58.893	48.309	37.398	1.00	16.13
	ATOM	4028	CB LEU	568	58.359	47.201	38.314	1.00	17.30
40	ATOM	4029	CG LEU	568	57.250	47.612	39.299	1.00	20.05
	ATOM	4030	CD1 LEU	568	56.889	46.432	40.190	1.00	18.53
	ATOM	4031	CD2 LEU	568	57.711	48.778	40.145	1.00	18.19
	ATOM	4032	C LEU	568	60.048	47.784	36.552	1.00	18.07
	ATOM	4033	O LEU	568	61.214	47.911	36.929	1.00	17.90
45	ATOM	4034	N CYS	569	59.720	47.202	35.403	1.00	18.05
	ATOM	4035	CA CYS	569	60.732	46.672	34.502	1.00	18.25
	ATOM	4036	C CYS	569	61.549	47.820	33.923	1.00	20.30
	ATOM	4037	O CYS	569	62.773	47.723	33.798	1.00	20.29
	ATOM	4038	CB CYS	569	60.067	45.860	33.388	1.00	16.73
50	ATOM	4039	SG CYS	569	59.390	44.286	34.002	1.00	19.14
	ATOM	4040	N GLN	570	60.868	48.905	33.571	1.00	20.33
	ATOM	4041	CA GLN	570	61.543	50.077	33.035	1.00	23.99
	ATOM	4042	CB GLN	570	60.520	51.120	32.572	1.00	26.88
	ATOM	4043	CG GLN	570	61.128	52.411	32.026	1.00	33.15
55	ATOM	4044	CD GLN	570	61.464	53.420	33.112	1.00	38.69
	ATOM	4045	OE1 GLN	570	62.144	54.418	32.859	1.00	42.37
	ATOM	4046	NE2 GLN	570	60.979	53.172	34.327	1.00	41.47
	ATOM	4047	C GLN	570	62.433	50.659	34.135	1.00	23.86
	ATOM	4048	O GLN	570	63.580	51.019	33.890	1.00	24.65
60	ATOM	4049	N ALA	571	61.902	50.730	35.351	1.00	24.19
	ATOM	4050	CA ALA	571	62.656	51.266	36.479	1.00	24.23

	ATOM	4051	CB	ALA	571	61.760	51.366	36.007	1.00	22.96
	ATOM	4052	C	ALA	571	63.864	50.384	36.783	1.00	25.45
	ATOM	4053	O	ALA	571	64.875	50.860	37.305	1.00	25.42
	ATOM	4054	N	ALA	572	63.750	49.099	36.459	1.00	24.84
5	ATOM	4055	CA	ALA	572	64.827	48.147	36.699	1.00	25.13
	ATOM	4056	CB	ALA	572	64.254	46.750	36.870	1.00	23.83
	ATOM	4057	C	ALA	572	65.863	48.152	35.573	1.00	25.94
	ATOM	4058	O	ALA	572	66.867	47.442	35.642	1.00	26.07
	ATOM	4059	N	GLY	573	65.609	48.947	34.537	1.00	26.23
10	ATOM	4060	CA	GLY	573	66.532	49.025	33.419	1.00	27.16
	ATOM	4061	C	GLY	573	66.339	47.967	32.344	1.00	28.15
	ATOM	4062	O	GLY	573	67.187	47.812	31.460	1.00	27.38
	ATOM	4063	N	HIS	574	65.229	47.238	32.400	1.00	28.43
	ATOM	4064	CA	HIS	574	64.969	46.204	31.406	1.00	27.36
15	ATOM	4065	CB	HIS	574	63.768	45.348	31.814	1.00	27.79
	ATOM	4066	CG	HIS	574	63.425	44.284	30.818	1.00	27.40
	ATOM	4067	CD2	HIS	574	62.483	44.244	29.845	1.00	26.79
	ATOM	4068	ND1	HIS	574	64.132	43.105	30.714	1.00	28.45
	ATOM	4069	CE1	HIS	574	63.643	42.386	29.720	1.00	27.27
20	ATOM	4070	NE2	HIS	574	62.642	43.055	29.175	1.00	26.73
	ATOM	4071	C	HIS	574	64.702	46.794	30.025	1.00	27.12
	ATOM	4072	O	HIS	574	64.038	47.820	29.886	1.00	26.50
	ATOM	4073	N	THR	575	65.226	46.130	29.004	1.00	27.68
	ATOM	4074	CA	THR	575	65.036	46.562	27.630	1.00	28.87
25	ATOM	4075	CB	THR	575	66.326	47.153	27.038	1.00	29.42
	ATOM	4076	OG1	THR	575	67.310	46.121	26.914	1.00	30.33
	ATOM	4077	CG2	THR	575	66.864	48.254	27.942	1.00	30.67
	ATOM	4078	C	THR	575	64.640	45.336	26.821	1.00	28.31
	ATOM	4079	O	THR	575	64.940	44.204	27.205	1.00	28.82
30	ATOM	4080	N	GLY	576	63.969	45.560	25.700	1.00	28.44
	ATOM	4081	CA	GLY	576	63.539	44.448	24.875	1.00	27.18
	ATOM	4082	C	GLY	576	62.119	44.050	25.230	1.00	25.91
	ATOM	4083	O	GLY	576	61.465	44.737	26.018	1.00	24.77
	ATOM	4084	N	PRO	577	61.619	42.933	24.678	1.00	24.95
35	ATOM	4085	CD	PRO	577	62.349	41.978	23.827	1.00	23.68
	ATOM	4086	CA	PRO	577	60.258	42.457	24.946	1.00	22.59
	ATOM	4087	CB	PRO	577	60.259	41.056	24.341	1.00	22.99
	ATOM	4088	CG	PRO	577	61.219	41.191	23.196	1.00	24.60
	ATOM	4089	C	PRO	577	59.910	42.446	26.431	1.00	21.80
40	ATOM	4090	O	PRO	577	60.659	41.917	27.254	1.00	19.91
	ATOM	4091	N	LEU	578	58.766	43.033	26.762	1.00	20.01
	ATOM	4092	CA	LEU	578	58.307	43.099	28.140	1.00	19.37
	ATOM	4093	CB	LEU	578	56.978	43.849	28.201	1.00	19.91
	ATOM	4094	CG	LEU	578	56.331	44.032	29.575	1.00	20.71
45	ATOM	4095	CD1	LEU	578	57.289	44.770	30.506	1.00	19.94
	ATOM	4096	CD2	LEU	578	55.027	44.807	29.412	1.00	19.01
	ATOM	4097	C	LEU	578	58.155	41.723	28.792	1.00	19.24
	ATOM	4098	O	LEU	578	58.455	41.558	29.977	1.00	19.94
	ATOM	4099	N	HIS	579	57.707	40.731	28.025	1.00	18.28
50	ATOM	4100	CA	HIS	579	57.506	39.399	28.584	1.00	17.96
	ATOM	4101	CB	HIS	579	56.750	38.496	27.598	1.00	17.78
	ATOM	4102	CG	HIS	579	57.550	38.091	26.397	1.00	19.87
	ATOM	4103	CD2	HIS	579	58.261	36.967	26.140	1.00	19.63
	ATOM	4104	ND1	HIS	579	57.660	38.881	25.272	1.00	20.33
55	ATOM	4105	CE1	HIS	579	58.403	38.259	24.372	1.00	21.49
	ATOM	4106	NE2	HIS	579	58.781	37.096	24.873	1.00	21.52
	ATOM	4107	C	HIS	579	58.788	38.703	29.038	1.00	18.92
	ATOM	4108	O	HIS	579	58.736	37.704	29.753	1.00	18.97
	ATOM	4109	N	LYS	580	59.939	39.227	28.628	1.00	19.36
60	ATOM	4110	CA	LYS	580	61.213	38.633	29.024	1.00	20.72
	ATOM	4111	CB	LYS	580	62.249	38.793	27.906	1.00	22.61

	ATOM	4112	LYS	580	61.921	38.033	26.6	1.00	26.07
	ATOM	4113	CD LYS	580	63.026	38.210	25.603	1.00	30.62
	ATOM	4114	CE LYS	580	62.691	37.498	24.303	1.00	32.64
	ATOM	4115	NZ LYS	580	63.739	37.735	23.272	1.00	36.23
5	ATOM	4116	C LYS	580	61.759	39.261	30.304	1.00	19.60
	ATOM	4117	O LYS	580	62.820	38.868	30.791	1.00	19.03
	ATOM	4118	N CYS	581	61.035	40.231	30.850	1.00	18.42
	ATOM	4119	CA CYS	581	61.481	40.906	32.064	1.00	17.07
	ATOM	4120	C CYS	581	61.314	40.101	33.347	1.00	17.10
10	ATOM	4121	O CYS	581	60.304	39.418	33.547	1.00	15.04
	ATOM	4122	CB CYS	581	60.760	42.250	32.216	1.00	18.37
	ATOM	4123	SG CYS	581	60.969	43.013	33.857	1.00	17.47
	ATOM	4124	N ASP	582	62.326	40.198	34.207	1.00	15.09
	ATOM	4125	CA ASP	582	62.349	39.536	35.508	1.00	16.68
15	ATOM	4126	CB ASP	582	63.280	38.317	35.483	1.00	17.27
	ATOM	4127	CG ASP	582	63.346	37.599	36.823	1.00	17.46
	ATOM	4128	OD1 ASP	582	62.896	38.168	37.840	1.00	20.34
	ATOM	4129	OD2 ASP	582	63.863	36.464	36.864	1.00	18.13
	ATOM	4130	C ASP	582	62.905	40.596	36.455	1.00	17.47
20	ATOM	4131	O ASP	582	64.090	40.934	36.391	1.00	17.45
	ATOM	4132	N ILE	583	62.053	41.128	37.326	1.00	16.24
	ATOM	4133	CA ILE	583	62.486	42.171	38.250	1.00	15.41
	ATOM	4134	CB ILE	583	61.307	43.072	38.690	1.00	14.68
	ATOM	4135	CG2 ILE	583	60.632	43.673	37.470	1.00	14.39
25	ATOM	4136	CG1 ILE	583	60.311	42.260	39.523	1.00	15.92
	ATOM	4137	CD1 ILE	583	59.269	43.108	40.237	1.00	14.64
	ATOM	4138	C ILE	583	63.153	41.641	39.510	1.00	14.69
	ATOM	4139	O ILE	583	63.339	42.393	40.461	1.00	15.92
	ATOM	4140	N TYR	584	63.515	40.361	39.525	1.00	14.71
30	ATOM	4141	CA TYR	584	64.159	39.793	40.707	1.00	16.16
	ATOM	4142	CB TYR	584	64.674	38.379	40.435	1.00	17.42
	ATOM	4143	CG TYR	584	65.201	37.707	41.687	1.00	20.19
	ATOM	4144	CD1 TYR	584	64.335	37.319	42.710	1.00	19.90
	ATOM	4145	CE1 TYR	584	64.818	36.736	43.882	1.00	22.35
35	ATOM	4146	CD2 TYR	584	66.569	37.496	41.868	1.00	21.27
	ATOM	4147	CE2 TYR	584	67.062	36.917	43.040	1.00	21.55
	ATOM	4148	CZ TYR	584	66.182	36.540	44.040	1.00	23.16
	ATOM	4149	OH TYR	584	66.667	35.970	45.197	1.00	24.33
	ATOM	4150	C TYR	584	65.313	40.665	41.203	1.00	17.22
40	ATOM	4151	O TYR	584	66.181	41.077	40.430	1.00	15.46
	ATOM	4152	N GLN	585	65.280	40.919	42.511	1.00	19.21
	ATOM	4153	CA GLN	585	66.220	41.732	43.291	1.00	20.56
	ATOM	4154	CB GLN	585	67.547	40.975	43.537	1.00	22.86
	ATOM	4155	CG GLN	585	68.714	41.237	42.615	1.00	25.28
45	ATOM	4156	CD GLN	585	70.041	40.759	43.227	1.00	25.98
	ATOM	4157	OE1 GLN	585	70.858	41.563	43.688	1.00	27.46
	ATOM	4158	NE2 GLN	585	70.246	39.449	43.244	1.00	21.75
	ATOM	4159	C GLN	585	66.473	43.182	42.874	1.00	20.42
	ATOM	4160	O GLN	585	67.461	43.798	43.278	1.00	21.28
50	ATOM	4161	N SER	586	65.550	43.745	42.102	1.00	19.19
	ATOM	4162	CA SER	586	65.660	45.139	41.690	1.00	19.32
	ATOM	4163	CB SER	586	64.786	45.414	40.471	1.00	18.80
	ATOM	4164	OG SER	586	64.601	46.811	40.310	1.00	18.57
	ATOM	4165	C SER	586	65.189	46.029	42.843	1.00	19.72
55	ATOM	4166	O SER	586	64.024	45.974	43.242	1.00	19.41
	ATOM	4167	N LYS	587	66.089	46.850	43.373	1.00	19.62
	ATOM	4168	CA LYS	587	65.732	47.732	44.478	1.00	19.54
	ATOM	4169	CB LYS	587	66.993	48.220	45.201	1.00	19.75
	ATOM	4170	CG LYS	587	67.817	47.097	45.824	1.00	19.70
60	ATOM	4171	CD LYS	587	66.996	46.278	46.807	1.00	19.79
	ATOM	4172	CE LYS	587	67.818	45.169	47.454	1.00	18.62

	ATOM	4173	NZ	LYS	587	68.332	44.187	45.55	1.00	17.59
	ATOM	4174	C	LYS	587	64.903	48.918	43.998	1.00	18.61
	ATOM	4175	O	LYS	587	64.079	49.442	44.746	1.00	18.91
	ATOM	4176	N	GLU	588	65.125	49.340	42.756	1.00	17.99
5	ATOM	4177	CA	GLU	588	64.368	50.453	42.189	1.00	19.42
	ATOM	4178	CB	GLU	588	64.886	50.814	40.793	1.00	21.76
	ATOM	4179	CG	GLU	588	66.272	51.445	40.746	1.00	27.43
	ATOM	4180	CD	GLU	588	67.376	50.476	41.117	1.00	29.76
	ATOM	4181	OE1	GLU	588	67.323	49.311	40.666	1.00	30.34
10	ATOM	4182	OE2	GLU	588	68.304	50.885	41.849	1.00	33.88
	ATOM	4183	C	GLU	588	62.898	50.048	42.081	1.00	19.93
	ATOM	4184	O	GLU	588	61.995	50.836	42.376	1.00	17.54
	ATOM	4185	N	ALA	589	62.669	48.813	41.645	1.00	19.54
	ATOM	4186	CA	ALA	589	61.315	48.292	41.503	1.00	19.77
15	ATOM	4187	CB	ALA	589	61.351	46.904	40.875	1.00	19.22
	ATOM	4188	C	ALA	589	60.657	48.231	42.879	1.00	19.77
	ATOM	4189	O	ALA	589	59.564	48.756	43.081	1.00	18.88
	ATOM	4190	N	GLY	590	61.339	47.596	43.825	1.00	19.84
	ATOM	4191	CA	GLY	590	60.802	47.485	45.169	1.00	20.54
20	ATOM	4192	C	GLY	590	60.463	48.824	45.808	1.00	21.45
	ATOM	4193	O	GLY	590	59.471	48.940	46.527	1.00	21.87
	ATOM	4194	N	GLN	591	61.274	49.842	45.541	1.00	21.62
	ATOM	4195	CA	GLN	591	61.039	51.156	46.125	1.00	23.40
	ATOM	4196	CB	GLN	591	62.209	52.093	45.822	1.00	27.20
25	ATOM	4197	CG	GLN	591	62.105	53.431	46.537	1.00	33.72
	ATOM	4198	CD	GLN	591	62.006	53.271	48.049	1.00	37.72
	ATOM	4199	OE1	GLN	591	62.942	52.804	48.701	1.00	40.06
	ATOM	4200	NE2	GLN	591	60.862	53.650	48.610	1.00	40.38
	ATOM	4201	C	GLN	591	59.734	51.797	45.657	1.00	22.75
30	ATOM	4202	O	GLN	591	59.049	52.458	46.436	1.00	22.38
	ATOM	4203	N	ARG	592	59.383	51.612	44.391	1.00	21.41
	ATOM	4204	CA	ARG	592	58.141	52.189	43.900	1.00	23.04
	ATOM	4205	CB	ARG	592	58.056	52.092	42.380	1.00	24.83
	ATOM	4206	CG	ARG	592	59.000	53.041	41.678	1.00	27.16
35	ATOM	4207	CD	ARG	592	58.672	53.136	40.216	1.00	30.01
	ATOM	4208	NE	ARG	592	59.631	53.965	39.500	1.00	30.87
	ATOM	4209	CZ	ARG	592	59.574	54.207	38.197	1.00	33.37
	ATOM	4210	NH1	ARG	592	58.597	53.680	37.468	1.00	33.76
	ATOM	4211	NH2	ARG	592	60.498	54.961	37.620	1.00	33.43
40	ATOM	4212	C	ARG	592	56.940	51.501	44.529	1.00	22.47
	ATOM	4213	O	ARG	592	55.957	52.151	44.884	1.00	23.13
	ATOM	4214	N	LEU	593	57.022	50.183	44.670	1.00	20.30
	ATOM	4215	CA	LEU	593	55.928	49.439	45.268	1.00	19.74
	ATOM	4216	CB	LEU	593	56.173	47.932	45.147	1.00	19.55
45	ATOM	4217	CG	LEU	593	55.936	47.315	43.765	1.00	21.26
	ATOM	4218	CD1	LEU	593	56.137	45.807	43.847	1.00	20.22
	ATOM	4219	CD2	LEU	593	54.518	47.639	43.289	1.00	18.77
	ATOM	4220	C	LEU	593	55.756	49.819	46.734	1.00	18.89
	ATOM	4221	O	LEU	593	54.633	49.946	47.218	1.00	17.61
50	ATOM	4222	N	ALA	594	56.872	50.003	47.434	1.00	17.55
	ATOM	4223	CA	ALA	594	56.827	50.358	48.851	1.00	19.25
	ATOM	4224	CB	ALA	594	58.236	50.327	49.449	1.00	17.33
	ATOM	4225	C	ALA	594	56.184	51.724	49.091	1.00	18.56
	ATOM	4226	O	ALA	594	55.281	51.852	49.914	1.00	19.48
55	ATOM	4227	N	THR	595	56.647	52.744	48.378	1.00	19.12
	ATOM	4228	CA	THR	595	56.091	54.081	48.558	1.00	20.47
	ATOM	4229	CB	THR	595	56.754	55.105	47.602	1.00	22.14
	ATOM	4230	OG1	THR	595	56.482	54.744	46.242	1.00	27.28
	ATOM	4231	CG2	THR	595	58.255	55.134	47.814	1.00	22.28
60	ATOM	4232	C	THR	595	54.584	54.067	48.306	1.00	20.42
	ATOM	4233	O	THR	595	53.823	54.741	49.006	1.00	20.17

	ATOM	4234	ALA	596	54.158	53.286	47.1	1.00	17.08
	ATOM	4235	CA ALA	596	52.744	53.191	46.972	1.00	15.64
	ATOM	4236	CB ALA	596	52.577	52.497	45.619	1.00	14.14
	ATOM	4237	C ALA	596	51.948	52.448	48.043	1.00	14.88
5	ATOM	4238	O ALA	596	50.891	52.914	48.474	1.00	15.10
	ATOM	4239	N MET	597	52.451	51.294	48.472	1.00	12.78
	ATOM	4240	CA MET	597	51.762	50.511	49.488	1.00	14.01
	ATOM	4241	CB MET	597	52.464	49.162	49.702	1.00	13.50
	ATOM	4242	CG MET	597	52.266	48.171	48.562	1.00	14.73
10	ATOM	4243	SD MET	597	52.878	46.512	48.914	1.00	17.16
	ATOM	4244	CE MET	597	54.598	46.708	48.490	1.00	16.02
	ATOM	4245	C MET	597	51.644	51.249	50.820	1.00	14.90
	ATOM	4246	O MET	597	50.648	51.108	51.525	1.00	13.57
	ATOM	4247	N LYS	598	52.659	52.037	51.157	1.00	15.99
15	ATOM	4248	CA LYS	598	52.660	52.786	52.412	1.00	17.02
	ATOM	4249	CB LYS	598	53.998	53.509	52.588	1.00	17.91
	ATOM	4250	CG LYS	598	55.146	52.592	52.970	1.00	22.00
	ATOM	4251	CD LYS	598	56.439	53.374	53.127	1.00	25.95
	ATOM	4252	CE LYS	598	57.505	52.545	53.830	1.00	28.04
20	ATOM	4253	NZ LYS	598	57.829	51.285	53.106	1.00	28.00
	ATOM	4254	C LYS	598	51.512	53.790	52.513	1.00	17.35
	ATOM	4255	O LYS	598	51.098	54.155	53.613	1.00	19.76
	ATOM	4256	N LEU	599	51.000	54.234	51.369	1.00	15.18
	ATOM	4257	CA LEU	599	49.892	55.184	51.355	1.00	14.61
25	ATOM	4258	CB LEU	599	49.652	55.722	49.940	1.00	15.70
	ATOM	4259	CG LEU	599	50.701	56.621	49.288	1.00	15.36
	ATOM	4260	CD1 LEU	599	50.234	56.968	47.888	1.00	15.46
	ATOM	4261	CD2 LEU	599	50.911	57.884	50.113	1.00	15.35
	ATOM	4262	C LEU	599	48.607	54.534	51.845	1.00	14.55
30	ATOM	4263	O LEU	599	47.686	55.222	52.285	1.00	16.32
	ATOM	4264	N GLY	600	48.544	53.209	51.767	1.00	13.23
	ATOM	4265	CA GLY	600	47.341	52.517	52.184	1.00	14.20
	ATOM	4266	C GLY	600	46.128	53.091	51.468	1.00	14.55
	ATOM	4267	O GLY	600	46.116	53.212	50.240	1.00	14.07
35	ATOM	4268	N PHE	601	45.117	53.468	52.242	1.00	15.08
	ATOM	4269	CA PHE	601	43.883	54.031	51.700	1.00	16.39
	ATOM	4270	CB PHE	601	42.684	53.251	52.271	1.00	16.50
	ATOM	4271	CG PHE	601	41.376	53.527	51.574	1.00	18.08
	ATOM	4272	CD1 PHE	601	41.221	53.255	50.217	1.00	18.28
40	ATOM	4273	CD2 PHE	601	40.290	54.033	52.284	1.00	18.21
	ATOM	4274	CE1 PHE	601	40.002	53.478	49.577	1.00	19.49
	ATOM	4275	CE2 PHE	601	39.060	54.262	51.653	1.00	19.93
	ATOM	4276	CZ PHE	601	38.918	53.982	50.297	1.00	18.56
	ATOM	4277	C PHE	601	43.786	55.518	52.079	1.00	16.63
45	ATOM	4278	O PHE	601	42.698	56.083	52.144	1.00	16.35
	ATOM	4279	N SER	602	44.934	56.152	52.302	1.00	18.17
	ATOM	4280	CA SER	602	44.968	57.561	52.699	1.00	19.16
	ATOM	4281	CB SER	602	46.294	57.868	53.395	1.00	19.08
	ATOM	4282	OG SER	602	47.375	57.759	52.484	1.00	16.23
50	ATOM	4283	C SER	602	44.751	58.593	51.590	1.00	21.31
	ATOM	4284	O SER	602	44.388	59.735	51.874	1.00	19.96
	ATOM	4285	N ARG	603	44.973	58.199	50.337	1.00	20.09
	ATOM	4286	CA ARG	603	44.816	59.118	49.207	1.00	21.67
	ATOM	4287	CB ARG	603	46.201	59.533	48.685	1.00	22.66
55	ATOM	4288	CG ARG	603	47.124	60.184	49.711	1.00	26.63
	ATOM	4289	CD ARG	603	46.639	61.574	50.087	1.00	28.83
	ATOM	4290	NE ARG	603	46.453	62.415	48.908	1.00	33.44
	ATOM	4291	CZ ARG	603	45.955	63.648	48.939	1.00	35.92
	ATOM	4292	NH1 ARG	603	45.594	64.189	50.096	1.00	35.88
60	ATOM	4293	NH2 ARG	603	45.808	64.337	47.816	1.00	35.28
	ATOM	4294	C ARG	603	44.037	58.471	48.058	1.00	20.33

	ATOM	4295	O	ARG	603	43.926	57.257	47.141	1.00	21.14
	ATOM	4296	N	PRO	604	43.486	59.283	47.141	1.00	21.16
	ATOM	4297	CD	PRO	604	43.484	60.757	47.074	1.00	20.84
	ATOM	4298	CA	PRO	604	42.742	58.700	46.016	1.00	20.12
5	ATOM	4299	CB	PRO	604	42.380	59.920	45.171	1.00	21.00
	ATOM	4300	CG	PRO	604	42.288	61.033	46.199	1.00	22.41
	ATOM	4301	C	PRO	604	43.717	57.765	45.294	1.00	18.21
	ATOM	4302	O	PRO	604	44.879	58.123	45.108	1.00	16.62
	ATOM	4303	N	TRP	605	43.256	56.588	44.871	1.00	16.20
10	ATOM	4304	CA	TRP	605	44.155	55.631	44.222	1.00	14.88
	ATOM	4305	CB	TRP	605	43.404	54.352	43.807	1.00	11.66
	ATOM	4306	CG	TRP	605	42.419	54.500	42.687	1.00	11.73
	ATOM	4307	CD2	TRP	605	42.712	54.543	41.285	1.00	10.38
	ATOM	4308	CE2	TRP	605	41.478	54.643	40.605	1.00	9.76
15	ATOM	4309	CE3	TRP	605	43.897	54.513	40.537	1.00	11.00
	ATOM	4310	CD1	TRP	605	41.059	54.575	42.797	1.00	11.94
	ATOM	4311	NE1	TRP	605	40.487	54.657	41.551	1.00	12.01
	ATOM	4312	CZ2	TRP	605	41.393	54.706	39.211	1.00	10.56
	ATOM	4313	CZ3	TRP	605	43.813	54.577	39.147	1.00	12.40
20	ATOM	4314	CH2	TRP	605	42.569	54.675	38.500	1.00	10.93
	ATOM	4315	C	TRP	605	44.990	56.138	43.048	1.00	14.01
	ATOM	4316	O	TRP	605	46.088	55.639	42.819	1.00	14.77
	ATOM	4317	N	PRO	606	44.491	57.132	42.287	1.00	14.29
	ATOM	4318	CD	PRO	606	43.145	57.734	42.275	1.00	12.19
25	ATOM	4319	CA	PRO	606	45.286	57.629	41.158	1.00	15.72
	ATOM	4320	CB	PRO	606	44.432	58.770	40.613	1.00	15.01
	ATOM	4321	CG	PRO	606	43.046	58.272	40.859	1.00	14.40
	ATOM	4322	C	PRO	606	46.687	58.091	41.559	1.00	17.03
	ATOM	4323	O	PRO	606	47.600	58.098	40.740	1.00	16.15
30	ATOM	4324	N	GLU	607	46.852	58.481	42.818	1.00	17.28
	ATOM	4325	CA	GLU	607	48.157	58.925	43.298	1.00	19.19
	ATOM	4326	CB	GLU	607	48.017	59.648	44.639	1.00	21.09
	ATOM	4327	CG	GLU	607	47.456	61.060	44.503	1.00	25.25
	ATOM	4328	CD	GLU	607	47.359	61.785	45.837	1.00	27.88
35	ATOM	4329	OE1	GLU	607	48.311	61.683	46.641	1.00	28.02
	ATOM	4330	OE2	GLU	607	46.334	62.462	46.075	1.00	29.69
	ATOM	4331	C	GLU	607	49.106	57.739	43.430	1.00	17.57
	ATOM	4332	O	GLU	607	50.268	57.828	43.052	1.00	18.96
	ATOM	4333	N	ALA	608	48.611	56.626	43.962	1.00	16.29
40	ATOM	4334	CA	ALA	608	49.438	55.434	44.094	1.00	16.79
	ATOM	4335	CB	ALA	608	48.693	54.353	44.871	1.00	14.91
	ATOM	4336	C	ALA	608	49.775	54.947	42.683	1.00	16.09
	ATOM	4337	O	ALA	608	50.886	54.488	42.425	1.00	16.14
	ATOM	4338	N	MET	609	48.810	55.056	41.772	1.00	15.85
45	ATOM	4339	CA	MET	609	49.024	54.649	40.383	1.00	15.49
	ATOM	4340	CB	MET	609	47.742	54.841	39.569	1.00	14.89
	ATOM	4341	CG	MET	609	47.885	54.548	38.068	1.00	12.61
	ATOM	4342	SD	MET	609	48.373	52.846	37.686	1.00	14.89
	ATOM	4343	CE	MET	609	46.752	52.007	37.746	1.00	9.67
50	ATOM	4344	C	MET	609	50.152	55.486	39.769	1.00	17.04
	ATOM	4345	O	MET	609	51.018	54.963	39.063	1.00	16.25
	ATOM	4346	N	GLN	610	50.131	56.787	40.044	1.00	16.65
	ATOM	4347	CA	GLN	610	51.149	57.697	39.527	1.00	17.56
	ATOM	4348	CB	GLN	610	50.798	59.148	39.865	1.00	21.08
55	ATOM	4349	CG	GLN	610	51.631	60.167	39.093	1.00	24.06
	ATOM	4350	CD	GLN	610	50.775	61.060	38.219	1.00	27.95
	ATOM	4351	OE1	GLN	610	50.227	62.066	38.675	1.00	30.67
	ATOM	4352	NE2	GLN	610	50.637	60.684	36.959	1.00	31.02
	ATOM	4353	C	GLN	610	52.521	57.362	40.103	1.00	18.21
60	ATOM	4354	O	GLN	610	53.513	57.324	39.375	1.00	17.58
	ATOM	4355	N	LEU	611	52.574	57.120	41.410	1.00	17.37

	ATOM	4356	LEU	611	53.831	56.775	42.000	1.00	19.20
	ATOM	4357	CB LEU	611	53.593	56.498	43.560	1.00	20.05
	ATOM	4358	CG LEU	611	53.385	57.741	44.430	1.00	22.61
	ATOM	4359	CD1 LEU	611	53.020	57.324	45.839	1.00	22.10
5	ATOM	4360	CD2 LEU	611	54.660	58.580	44.431	1.00	21.77
	ATOM	4361	C LEU	611	54.517	55.567	41.434	1.00	18.06
	ATOM	4362	O LEU	611	55.743	55.524	41.319	1.00	17.10
	ATOM	4363	N ILE	612	53.728	54.585	41.019	1.00	17.78
	ATOM	4364	CA ILE	612	54.289	53.384	40.408	1.00	15.89
10	ATOM	4365	CB ILE	612	53.356	52.167	40.609	1.00	17.36
	ATOM	4366	CG2 ILE	612	53.944	50.944	39.917	1.00	17.31
	ATOM	4367	CG1 ILE	612	53.158	51.888	42.099	1.00	17.99
	ATOM	4368	CD1 ILE	612	52.075	50.865	42.391	1.00	16.14
	ATOM	4369	C ILE	612	54.562	53.505	38.907	1.00	16.86
15	ATOM	4370	O ILE	612	55.643	53.151	38.440	1.00	18.03
	ATOM	4371	N THR	613	53.586	54.018	38.162	1.00	16.36
	ATOM	4372	CA THR	613	53.684	54.108	36.707	1.00	15.96
	ATOM	4373	CB THR	613	52.368	53.622	36.079	1.00	14.90
	ATOM	4374	OG1 THR	613	51.341	54.594	36.320	1.00	12.04
20	ATOM	4375	CG2 THR	613	51.941	52.289	36.701	1.00	12.12
	ATOM	4376	C THR	613	54.035	55.452	36.059	1.00	17.25
	ATOM	4377	O THR	613	54.323	55.502	34.860	1.00	16.91
	ATOM	4378	N GLY	614	54.000	56.538	36.826	1.00	16.88
	ATOM	4379	CA GLY	614	54.315	57.836	36.251	1.00	16.24
25	ATOM	4380	C GLY	614	53.126	58.496	35.572	1.00	17.22
	ATOM	4381	O GLY	614	53.256	59.556	34.962	1.00	16.05
	ATOM	4382	N GLN	615	51.965	57.854	35.659	1.00	17.32
	ATOM	4383	CA GLN	615	50.736	58.391	35.086	1.00	15.68
	ATOM	4384	CB GLN	615	50.551	57.895	33.644	1.00	15.80
30	ATOM	4385	CG GLN	615	50.422	56.397	33.467	1.00	16.06
	ATOM	4386	CD GLN	615	49.041	55.919	33.822	1.00	14.47
	ATOM	4387	OE1 GLN	615	48.045	56.448	33.322	1.00	14.28
	ATOM	4388	NE2 GLN	615	48.966	54.919	34.686	1.00	12.42
	ATOM	4389	C GLN	615	49.622	57.957	36.048	1.00	14.75
35	ATOM	4390	O GLN	615	49.815	57.042	36.837	1.00	14.61
	ATOM	4391	N PRO	616	48.443	58.599	35.994	1.00	14.37
	ATOM	4392	CD PRO	616	48.129	59.856	35.288	1.00	15.57
	ATOM	4393	CA PRO	616	47.357	58.248	36.917	1.00	14.41
	ATOM	4394	CB PRO	616	46.829	59.617	37.298	1.00	15.41
40	ATOM	4395	CG PRO	616	46.800	60.287	35.933	1.00	14.41
	ATOM	4396	C PRO	616	46.202	57.320	36.543	1.00	14.55
	ATOM	4397	O PRO	616	45.390	56.988	37.409	1.00	13.74
	ATOM	4398	N ASN	617	46.108	56.904	35.289	1.00	14.76
	ATOM	4399	CA ASN	617	44.985	56.072	34.869	1.00	16.09
45	ATOM	4400	CB ASN	617	44.495	56.545	33.501	1.00	17.02
	ATOM	4401	CG ASN	617	44.216	58.029	33.462	1.00	18.18
	ATOM	4402	OD1 ASN	617	44.489	58.692	32.463	1.00	22.94
	ATOM	4403	ND2 ASN	617	43.658	58.557	34.542	1.00	18.54
	ATOM	4404	C ASN	617	45.226	54.573	34.777	1.00	14.02
50	ATOM	4405	O ASN	617	46.364	54.105	34.776	1.00	13.88
	ATOM	4406	N MET	618	44.124	53.829	34.710	1.00	13.32
	ATOM	4407	CA MET	618	44.179	52.387	34.516	1.00	14.06
	ATOM	4408	CB MET	618	42.868	51.709	34.929	1.00	11.91
	ATOM	4409	CG MET	618	42.667	51.565	36.425	1.00	12.29
55	ATOM	4410	SD MET	618	41.194	50.589	36.832	1.00	13.39
	ATOM	4411	CE MET	618	39.927	51.842	36.691	1.00	14.36
	ATOM	4412	C MET	618	44.316	52.322	32.997	1.00	14.48
	ATOM	4413	O MET	618	43.788	53.187	32.291	1.00	13.59
	ATOM	4414	N SER	619	45.013	51.318	32.488	1.00	12.87
60	ATOM	4415	CA SER	619	45.194	51.215	31.049	1.00	13.47
	ATOM	4416	CB SER	619	46.309	52.168	30.599	1.00	13.34

	ATOM	4417	OG	SER	619	46.562	52.039	22.215	1.00	16.20
	ATOM	4418	C	SER	619	45.540	49.797	30.631	1.00	12.99
	ATOM	4419	O	SER	619	46.338	49.131	31.288	1.00	12.36
	ATOM	4420	N	ALA	620	44.937	49.350	29.533	1.00	12.12
5	ATOM	4421	CA	ALA	620	45.177	48.012	29.001	1.00	13.20
	ATOM	4422	CB	ALA	620	43.968	47.555	28.189	1.00	9.78
	ATOM	4423	C	ALA	620	46.433	47.971	28.125	1.00	13.52
	ATOM	4424	O	ALA	620	46.845	46.901	27.672	1.00	12.99
	ATOM	4425	N	SER	621	47.036	49.135	27.886	1.00	14.24
10	ATOM	4426	CA	SER	621	48.239	49.219	27.049	1.00	14.97
	ATOM	4427	CB	SER	621	48.788	50.649	27.037	1.00	15.46
	ATOM	4428	OG	SER	621	47.972	51.485	26.239	1.00	22.97
	ATOM	4429	C	SER	621	49.361	48.266	27.446	1.00	13.26
	ATOM	4430	O	SER	621	49.919	47.576	26.600	1.00	12.69
15	ATOM	4431	N	ALA	622	49.697	48.241	28.730	1.00	12.55
	ATOM	4432	CA	ALA	622	50.761	47.374	29.220	1.00	12.62
	ATOM	4433	CB	ALA	622	50.945	47.576	30.718	1.00	13.96
	ATOM	4434	C	ALA	622	50.476	45.902	28.917	1.00	13.74
	ATOM	4435	O	ALA	622	51.344	45.181	28.412	1.00	13.46
20	ATOM	4436	N	MET	623	49.261	45.458	29.227	1.00	12.23
	ATOM	4437	CA	MET	623	48.882	44.074	28.977	1.00	11.27
	ATOM	4438	CB	MET	623	47.501	43.792	29.578	1.00	11.37
	ATOM	4439	CG	MET	623	47.048	42.354	29.452	1.00	12.71
	ATOM	4440	SD	MET	623	45.490	42.044	30.308	1.00	16.84
25	ATOM	4441	CE	MET	623	45.878	40.541	31.173	1.00	14.59
	ATOM	4442	C	MET	623	48.892	43.767	27.476	1.00	11.91
	ATOM	4443	O	MET	623	49.352	42.706	27.058	1.00	13.42
	ATOM	4444	N	LEU	624	48.397	44.694	26.662	1.00	13.23
	ATOM	4445	CA	LEU	624	48.392	44.486	25.212	1.00	15.53
30	ATOM	4446	CB	LEU	624	47.622	45.611	24.505	1.00	15.98
	ATOM	4447	CG	LEU	624	46.108	45.644	24.741	1.00	19.16
	ATOM	4448	CD1	LEU	624	45.483	46.800	23.970	1.00	18.76
	ATOM	4449	CD2	LEU	624	45.496	44.322	24.302	1.00	21.48
	ATOM	4450	C	LEU	624	49.824	44.419	24.674	1.00	15.45
35	ATOM	4451	O	LEU	624	50.141	43.602	23.808	1.00	15.14
	ATOM	4452	N	SER	625	50.688	45.281	25.198	1.00	15.79
	ATOM	4453	CA	SER	625	52.088	45.315	24.788	1.00	16.37
	ATOM	4454	CB	SER	625	52.788	46.502	25.462	1.00	16.92
	ATOM	4455	OG	SER	625	54.196	46.404	25.354	1.00	22.26
40	ATOM	4456	C	SER	625	52.777	43.995	25.168	1.00	16.55
	ATOM	4457	O	SER	625	53.544	43.426	24.385	1.00	17.40
	ATOM	4458	N	TYR	626	52.490	43.511	26.372	1.00	14.61
	ATOM	4459	CA	TYR	626	53.055	42.253	26.858	1.00	13.80
	ATOM	4460	CB	TYR	626	52.487	41.939	28.251	1.00	13.59
45	ATOM	4461	CG	TYR	626	53.024	40.679	28.896	1.00	14.23
	ATOM	4462	CD1	TYR	626	54.061	40.733	29.827	1.00	15.51
	ATOM	4463	CE1	TYR	626	54.538	39.574	30.438	1.00	14.52
	ATOM	4464	CD2	TYR	626	52.481	39.431	28.587	1.00	12.73
	ATOM	4465	CE2	TYR	626	52.951	38.275	29.186	1.00	12.06
50	ATOM	4466	CZ	TYR	626	53.975	38.348	30.111	1.00	14.06
	ATOM	4467	OH	TYR	626	54.425	37.193	30.713	1.00	13.54
	ATOM	4468	C	TYR	626	52.721	41.101	25.901	1.00	13.64
	ATOM	4469	O	TYR	626	53.585	40.287	25.567	1.00	12.40
	ATOM	4470	N	PHE	627	51.467	41.039	25.461	1.00	12.53
55	ATOM	4471	CA	PHE	627	51.021	39.969	24.567	1.00	14.30
	ATOM	4472	CB	PHE	627	49.608	39.515	24.955	1.00	11.92
	ATOM	4473	CG	PHE	627	49.534	38.832	26.285	1.00	12.27
	ATOM	4474	CD1	PHE	627	49.087	39.517	27.414	1.00	12.27
	ATOM	4475	CD2	PHE	627	49.902	37.497	26.410	1.00	10.91
60	ATOM	4476	CE1	PHE	627	49.008	38.880	28.649	1.00	12.53
	ATOM	4477	CE2	PHE	627	49.829	36.848	27.639	1.00	11.87

	ATOM	4478	PHE	627	49.379	37.539	28.1	1.00	13.01	
	ATOM	4479	C	PHE	627	51.030	40.267	23.066	1.00	14.21
	ATOM	4480	O	PHE	627	50.575	39.446	22.274	1.00	15.37
5	ATOM	4481	N	LYS	628	51.538	41.430	22.671	1.00	15.87
	ATOM	4482	CA	LYS	628	51.570	41.801	21.258	1.00	15.56
	ATOM	4483	CB	LYS	628	52.415	43.065	21.065	1.00	18.34
	ATOM	4484	CG	LYS	628	52.689	43.436	19.608	1.00	20.03
	ATOM	4485	CD	LYS	628	51.421	43.755	18.835	1.00	21.75
10	ATOM	4486	CE	LYS	628	51.754	44.104	17.378	1.00	25.43
	ATOM	4487	NZ	LYS	628	50.542	44.288	16.531	1.00	24.46
	ATOM	4488	C	LYS	628	52.080	40.682	20.345	1.00	15.60
	ATOM	4489	O	LYS	628	51.462	40.383	19.324	1.00	17.04
	ATOM	4490	N	PRO	629	53.215	40.054	20.693	1.00	15.51
15	ATOM	4491	CD	PRO	629	54.172	40.346	21.775	1.00	16.28
	ATOM	4492	CA	PRO	629	53.715	38.978	19.830	1.00	16.88
	ATOM	4493	CB	PRO	629	54.987	38.522	20.545	1.00	17.11
	ATOM	4494	CG	PRO	629	55.463	39.781	21.218	1.00	16.67
	ATOM	4495	C	PRO	629	52.690	37.848	19.676	1.00	17.03
20	ATOM	4496	O	PRO	629	52.496	37.320	18.579	1.00	17.38
	ATOM	4497	N	LEU	630	52.027	37.486	20.771	1.00	16.19
	ATOM	4498	CA	LEU	630	51.033	36.424	20.718	1.00	15.34
	ATOM	4499	CB	LEU	630	50.570	36.044	22.126	1.00	14.76
	ATOM	4500	CG	LEU	630	49.601	34.856	22.206	1.00	15.06
25	ATOM	4501	CD1	LEU	630	50.308	33.587	21.767	1.00	15.11
	ATOM	4502	CD2	LEU	630	49.086	34.696	23.623	1.00	14.11
	ATOM	4503	C	LEU	630	49.831	36.835	19.872	1.00	15.75
	ATOM	4504	O	LEU	630	49.308	36.035	19.098	1.00	15.82
	ATOM	4505	N	LEU	631	49.389	38.081	20.018	1.00	16.88
30	ATOM	4506	CA	LEU	631	48.249	38.564	19.245	1.00	17.64
	ATOM	4507	CB	LEU	631	47.959	40.036	19.556	1.00	17.22
	ATOM	4508	CG	LEU	631	46.810	40.681	18.765	1.00	20.26
	ATOM	4509	CD1	LEU	631	45.498	39.989	19.100	1.00	20.21
	ATOM	4510	CD2	LEU	631	46.719	42.161	19.093	1.00	19.79
35	ATOM	4511	C	LEU	631	48.533	38.405	17.753	1.00	18.65
	ATOM	4512	O	LEU	631	47.681	37.929	17.005	1.00	18.10
	ATOM	4513	N	ASP	632	49.731	38.802	17.326	1.00	17.92
	ATOM	4514	CA	ASP	632	50.109	38.692	15.920	1.00	18.59
	ATOM	4515	CB	ASP	632	51.485	39.326	15.671	1.00	19.38
40	ATOM	4516	CG	ASP	632	51.480	40.827	15.866	1.00	19.25
	ATOM	4517	OD1	ASP	632	50.445	41.457	15.585	1.00	23.41
	ATOM	4518	OD2	ASP	632	52.514	41.385	16.283	1.00	23.91
	ATOM	4519	C	ASP	632	50.138	37.234	15.476	1.00	17.19
	ATOM	4520	O	ASP	632	49.677	36.898	14.385	1.00	15.78
45	ATOM	4521	N	TRP	633	50.682	36.368	16.326	1.00	16.49
	ATOM	4522	CA	TRP	633	50.756	34.950	15.997	1.00	16.56
	ATOM	4523	CB	TRP	633	51.565	34.194	17.057	1.00	16.10
	ATOM	4524	CG	TRP	633	51.804	32.763	16.687	1.00	17.24
	ATOM	4525	CD2	TRP	633	50.971	31.645	17.015	1.00	17.80
50	ATOM	4526	CE2	TRP	633	51.523	30.510	16.380	1.00	18.16
	ATOM	4527	CE3	TRP	633	49.807	31.491	17.782	1.00	17.82
	ATOM	4528	CD1	TRP	633	52.804	32.273	15.892	1.00	17.18
	ATOM	4529	NE1	TRP	633	52.641	30.922	15.703	1.00	17.98
	ATOM	4530	CZ2	TRP	633	50.952	29.240	16.486	1.00	17.93
55	ATOM	4531	CZ3	TRP	633	49.240	30.226	17.889	1.00	19.24
	ATOM	4532	CH2	TRP	633	49.815	29.117	17.243	1.00	17.03
	ATOM	4533	C	TRP	633	49.347	34.359	15.912	1.00	16.87
	ATOM	4534	O	TRP	633	49.048	33.559	15.024	1.00	15.40
	ATOM	4535	N	LEU	634	48.480	34.770	16.833	1.00	16.10
60	ATOM	4536	CA	LEU	634	47.108	34.275	16.872	1.00	15.03
	ATOM	4537	CB	LEU	634	46.406	34.749	18.151	1.00	13.27
	ATOM	4538	CG	LEU	634	46.720	33.957	19.419	1.00	14.68

	ATOM	4540	CD1	LEU	634	46.010	34.593	19.609	1.00	11.99
	ATOM	4540	CD2	LEU	634	46.276	32.498	19.240	1.00	15.41
	ATOM	4541	C	LEU	634	46.291	34.686	15.655	1.00	14.79
	ATOM	4542	O	LEU	634	45.509	33.896	15.130	1.00	13.57
5	ATOM	4543	N	ARG	635	46.460	35.923	15.208	1.00	14.72
	ATOM	4544	CA	ARG	635	45.720	36.385	14.041	1.00	16.48
	ATOM	4545	CB	ARG	635	45.919	37.888	13.839	1.00	16.73
	ATOM	4546	CG	ARG	635	45.030	38.742	14.722	1.00	20.60
	ATOM	4547	CD	ARG	635	45.367	40.211	14.574	1.00	25.55
10	ATOM	4548	NE	ARG	635	44.462	41.063	15.340	1.00	29.96
	ATOM	4549	CZ	ARG	635	44.726	42.325	15.659	1.00	31.82
	ATOM	4550	NH1	ARG	635	45.871	42.880	15.280	1.00	31.36
	ATOM	4551	NH2	ARG	635	43.846	43.034	16.353	1.00	34.01
	ATOM	4552	C	ARG	635	46.158	35.618	12.797	1.00	16.36
15	ATOM	4553	O	ARG	635	45.327	35.194	11.997	1.00	16.07
	ATOM	4554	N	THR	636	47.463	35.430	12.645	1.00	16.74
	ATOM	4555	CA	THR	636	47.983	34.698	11.494	1.00	16.97
	ATOM	4556	CB	THR	636	49.524	34.739	11.463	1.00	17.36
	ATOM	4557	OG1	THR	636	49.956	36.094	11.282	1.00	18.76
20	ATOM	4558	CG2	THR	636	50.064	33.874	10.324	1.00	17.64
	ATOM	4559	C	THR	636	47.513	33.243	11.522	1.00	15.76
	ATOM	4560	O	THR	636	47.099	32.707	10.501	1.00	14.02
	ATOM	4561	N	GLU	637	47.568	32.615	12.695	1.00	15.46
	ATOM	4562	CA	GLU	637	47.137	31.223	12.842	1.00	15.45
25	ATOM	4563	CB	GLU	637	47.484	30.695	14.241	1.00	15.84
	ATOM	4564	CG	GLU	637	46.905	29.309	14.562	1.00	17.40
	ATOM	4565	CD	GLU	637	47.626	28.165	13.849	1.00	21.20
	ATOM	4566	OE1	GLU	637	48.417	28.429	12.922	1.00	20.76
	ATOM	4567	OE2	GLU	637	47.394	26.992	14.217	1.00	24.25
30	ATOM	4568	C	GLU	637	45.638	31.059	12.601	1.00	14.61
	ATOM	4569	O	GLU	637	45.224	30.163	11.869	1.00	14.03
	ATOM	4570	N	ASN	638	44.825	31.911	13.222	1.00	15.50
	ATOM	4571	CA	ASN	638	43.378	31.824	13.046	1.00	15.74
	ATOM	4572	CB	ASN	638	42.643	32.768	14.006	1.00	15.40
35	ATOM	4573	CG	ASN	638	42.690	32.288	15.447	1.00	15.23
	ATOM	4574	OD1	ASN	638	42.765	31.084	15.713	1.00	12.88
	ATOM	4575	ND2	ASN	638	42.633	33.228	16.387	1.00	11.63
	ATOM	4576	C	ASN	638	42.972	32.146	11.617	1.00	17.16
	ATOM	4577	O	ASN	638	42.029	31.563	11.086	1.00	16.41
40	ATOM	4578	N	GLU	639	43.691	33.076	10.996	1.00	18.19
	ATOM	4579	CA	GLU	639	43.402	33.476	9.628	1.00	20.22
	ATOM	4580	CB	GLU	639	44.260	34.686	9.240	1.00	20.36
	ATOM	4581	CG	GLU	639	44.222	35.028	7.756	1.00	25.06
	ATOM	4582	CD	GLU	639	45.156	36.172	7.400	1.00	26.81
45	ATOM	4583	OE1	GLU	639	44.849	37.324	7.773	1.00	29.07
	ATOM	4584	OE2	GLU	639	46.201	35.917	6.759	1.00	25.74
	ATOM	4585	C	GLU	639	43.635	32.343	8.630	1.00	20.09
	ATOM	4586	O	GLU	639	42.799	32.092	7.763	1.00	18.73
	ATOM	4587	N	LEU	640	44.760	31.647	8.751	1.00	20.74
50	ATOM	4588	CA	LEU	640	45.044	30.572	7.811	1.00	20.59
	ATOM	4589	CB	LEU	640	46.506	30.127	7.936	1.00	22.92
	ATOM	4590	CG	LEU	640	47.008	29.340	9.139	1.00	24.43
	ATOM	4591	CD1	LEU	640	46.740	27.859	8.916	1.00	25.30
	ATOM	4592	CD2	LEU	640	48.508	29.571	9.297	1.00	25.43
55	ATOM	4593	C	LEU	640	44.086	29.393	7.976	1.00	19.55
	ATOM	4594	O	LEU	640	43.888	28.610	7.047	1.00	17.75
	ATOM	4595	N	HIS	641	43.474	29.280	9.151	1.00	19.69
	ATOM	4596	CA	HIS	641	42.518	28.208	9.400	1.00	19.52
	ATOM	4597	CB	HIS	641	42.655	27.687	10.832	1.00	18.00
60	ATOM	4598	CG	HIS	641	43.861	26.829	11.038	1.00	20.33
	ATOM	4599	CD2	HIS	641	44.212	25.645	10.485	1.00	19.67

	ATOM	4600	CD1	HIS	641	44.902	27.188	11.817	1.00	22.38
	ATOM	4601	CE1	HIS	641	45.843	26.264	11.814	1.00	19.87
	ATOM	4602	NE2	HIS	641	45.450	25.317	10.982	1.00	23.55
	ATOM	4603	C	HIS	641	41.088	28.668	9.139	1.00	18.42
5	ATOM	4604	O	HIS	641	40.144	27.894	9.282	1.00	19.70
	ATOM	4605	N	GLY	642	40.941	29.931	8.749	1.00	18.10
	ATOM	4606	CA	GLY	642	39.627	30.480	8.456	1.00	19.31
	ATOM	4607	C	GLY	642	38.673	30.513	9.638	1.00	20.19
	ATOM	4608	O	GLY	642	37.473	30.272	9.482	1.00	20.13
10	ATOM	4609	N	GLU	643	39.192	30.817	10.820	1.00	18.07
	ATOM	4610	CA	GLU	643	38.353	30.866	12.013	1.00	18.39
	ATOM	4611	CB	GLU	643	39.216	30.975	13.275	1.00	16.96
	ATOM	4612	CG	GLU	643	40.297	29.914	13.395	1.00	17.41
	ATOM	4613	CD	GLU	643	39.741	28.519	13.602	1.00	15.36
15	ATOM	4614	OE1	GLU	643	38.504	28.345	13.574	1.00	15.16
	ATOM	4615	OE2	GLU	643	40.554	27.595	13.794	1.00	18.49
	ATOM	4616	C	GLU	643	37.395	32.048	11.980	1.00	18.65
	ATOM	4617	O	GLU	643	37.744	33.136	11.516	1.00	20.72
	ATOM	4618	N	LYS	644	36.181	31.818	12.469	1.00	18.08
20	ATOM	4619	CA	LYS	644	35.168	32.859	12.560	1.00	17.63
	ATOM	4620	CB	LYS	644	33.796	32.312	12.169	1.00	21.41
	ATOM	4621	CG	LYS	644	32.658	33.304	12.356	1.00	27.52
	ATOM	4622	CD	LYS	644	31.314	32.656	12.064	1.00	33.74
	ATOM	4623	CE	LYS	644	30.179	33.660	12.149	1.00	36.34
25	ATOM	4624	NZ	LYS	644	28.880	33.042	11.750	1.00	39.29
	ATOM	4625	C	LYS	644	35.165	33.262	14.030	1.00	17.75
	ATOM	4626	O	LYS	644	34.652	32.527	14.876	1.00	17.16
	ATOM	4627	N	LEU	645	35.753	34.417	14.330	1.00	16.17
	ATOM	4628	CA	LEU	645	35.841	34.899	15.705	1.00	16.77
30	ATOM	4629	CB	LEU	645	36.665	36.186	15.767	1.00	15.16
	ATOM	4630	CG	LEU	645	38.096	36.118	15.230	1.00	16.86
	ATOM	4631	CD1	LEU	645	38.773	37.464	15.445	1.00	16.62
	ATOM	4632	CD2	LEU	645	38.865	35.008	15.924	1.00	15.25
	ATOM	4633	C	LEU	645	34.479	35.149	16.328	1.00	16.42
35	ATOM	4634	O	LEU	645	33.562	35.621	15.668	1.00	15.27
	ATOM	4635	N	GLY	646	34.352	34.832	17.611	1.00	16.60
	ATOM	4636	CA	GLY	646	33.089	35.048	18.287	1.00	16.22
	ATOM	4637	C	GLY	646	32.126	33.881	18.183	1.00	17.80
	ATOM	4638	O	GLY	646	32.501	32.773	17.793	1.00	17.07
40	ATOM	4639	N	TRP	647	30.872	34.142	18.529	1.00	18.98
	ATOM	4640	CA	TRP	647	29.840	33.116	18.516	1.00	25.11
	ATOM	4641	CB	TRP	647	29.775	32.464	19.896	1.00	21.13
	ATOM	4642	CG	TRP	647	29.941	33.462	21.022	1.00	17.17
	ATOM	4643	CD2	TRP	647	31.178	33.914	21.590	1.00	14.61
45	ATOM	4644	CE2	TRP	647	30.857	34.870	22.583	1.00	14.82
	ATOM	4645	CE3	TRP	647	32.526	33.609	21.354	1.00	12.25
	ATOM	4646	CD1	TRP	647	28.950	34.139	21.676	1.00	16.56
	ATOM	4647	NE1	TRP	647	29.491	34.984	22.616	1.00	15.68
	ATOM	4648	CZ2	TRP	647	31.838	35.523	23.343	1.00	12.54
50	ATOM	4649	CZ3	TRP	647	33.504	34.258	22.110	1.00	13.82
	ATOM	4650	CH2	TRP	647	33.151	35.206	23.094	1.00	13.80
	ATOM	4651	C	TRP	647	28.480	33.697	18.135	1.00	31.34
	ATOM	4652	O	TRP	647	27.675	34.038	18.995	1.00	31.85
	ATOM	4653	N	PRO	648	28.207	33.807	16.823	1.00	37.87
55	ATOM	4654	CD	PRO	648	29.017	33.206	15.747	1.00	39.60
	ATOM	4655	CA	PRO	648	26.951	34.344	16.284	1.00	41.15
	ATOM	4656	CB	PRO	648	27.117	34.156	14.778	1.00	42.26
	ATOM	4657	CG	PRO	648	27.978	32.919	14.693	1.00	41.09
	ATOM	4658	C	PRO	648	25.709	33.627	16.822	1.00	43.83
60	ATOM	4659	O	PRO	648	24.732	34.318	17.183	1.00	45.84
	ATOM	4660	OXT	PRO	648	25.725	32.377	16.859	1.00	46.26

	ATOM	4660	OH2	WAT	705	33.593	46.605	42.423	1.00	9.31
	ATOM	4662	OH2	WAT	706	32.965	26.053	34.132	1.00	8.96
	ATOM	4663	OH2	WAT	707	24.287	47.413	42.078	1.00	8.51
	ATOM	4664	OH2	WAT	708	41.492	22.684	37.822	1.00	11.40
5	ATOM	4665	OH2	WAT	709	57.508	41.508	37.660	1.00	13.76
	ATOM	4666	OH2	WAT	710	39.412	23.942	39.181	1.00	8.91
	ATOM	4667	OH2	WAT	711	51.091	36.475	38.087	1.00	10.07
	ATOM	4668	OH2	WAT	712	53.042	51.060	33.144	1.00	16.13
	ATOM	4669	OH2	WAT	713	52.228	34.436	36.844	1.00	10.52
10	ATOM	4670	OH2	WAT	714	16.492	44.739	50.912	1.00	12.73
	ATOM	4671	OH2	WAT	715	47.496	46.775	31.239	1.00	10.24
	ATOM	4672	OH2	WAT	716	33.685	54.185	42.672	1.00	16.09
	ATOM	4673	OH2	WAT	717	33.197	41.542	38.210	1.00	12.21
	ATOM	4674	OH2	WAT	718	37.259	27.514	46.151	1.00	11.50
15	ATOM	4675	OH2	WAT	719	17.570	40.507	43.225	1.00	12.99
	ATOM	4676	OH2	WAT	720	40.862	49.469	48.991	1.00	9.86
	ATOM	4677	OH2	WAT	721	37.202	32.888	29.681	1.00	9.25
	ATOM	4678	OH2	WAT	722	48.308	52.095	48.720	1.00	13.18
	ATOM	4679	OH2	WAT	723	44.174	25.251	17.566	1.00	11.48
20	ATOM	4680	OH2	WAT	724	37.635	28.226	16.249	1.00	13.61
	ATOM	4681	OH2	WAT	725	31.657	44.896	43.119	1.00	8.30
	ATOM	4682	OH2	WAT	726	48.823	40.553	46.220	1.00	14.22
	ATOM	4683	OH2	WAT	727	43.137	28.430	14.664	1.00	15.95
	ATOM	4684	OH2	WAT	728	36.288	33.431	19.194	1.00	9.04
25	ATOM	4685	OH2	WAT	729	45.181	39.323	41.443	1.00	15.73
	ATOM	4686	OH2	WAT	730	19.065	49.680	43.390	1.00	14.42
	ATOM	4687	OH2	WAT	731	18.532	48.145	47.790	1.00	14.97
	ATOM	4688	OH2	WAT	732	16.291	39.074	47.581	1.00	12.27
	ATOM	4689	OH2	WAT	734	27.683	37.166	46.929	1.00	9.69
30	ATOM	4690	OH2	WAT	735	43.137	42.880	22.592	1.00	14.48
	ATOM	4691	OH2	WAT	736	23.024	50.329	41.657	1.00	17.32
	ATOM	4692	OH2	WAT	737	40.667	28.535	40.057	1.00	16.00
	ATOM	4693	OH2	WAT	738	44.387	45.117	56.435	1.00	14.17
	ATOM	4694	OH2	WAT	739	42.945	25.383	33.384	1.00	13.52
35	ATOM	4695	OH2	WAT	740	36.456	23.986	32.241	1.00	8.95
	ATOM	4696	OH2	WAT	741	39.950	39.788	48.186	1.00	12.78
	ATOM	4697	OH2	WAT	742	47.924	45.637	61.414	1.00	20.16
	ATOM	4698	OH2	WAT	743	48.523	42.505	62.565	1.00	17.18
	ATOM	4699	OH2	WAT	744	16.710	44.022	47.985	1.00	15.86
40	ATOM	4700	OH2	WAT	745	50.722	52.452	33.013	1.00	14.62
	ATOM	4701	OH2	WAT	746	42.905	51.202	39.594	1.00	14.40
	ATOM	4702	OH2	WAT	747	43.215	36.931	50.988	1.00	16.61
	ATOM	4703	OH2	WAT	748	37.286	29.700	43.929	1.00	19.60
	ATOM	4704	OH2	WAT	749	31.745	23.237	13.527	1.00	19.26
45	ATOM	4705	OH2	WAT	750	50.872	32.438	13.257	1.00	13.65
	ATOM	4706	OH2	WAT	751	23.924	24.786	40.648	1.00	14.00
	ATOM	4707	OH2	WAT	752	46.065	55.788	48.966	1.00	12.21
	ATOM	4708	OH2	WAT	753	17.359	38.412	45.074	1.00	16.22
	ATOM	4709	OH2	WAT	754	30.402	54.271	37.540	1.00	19.90
50	ATOM	4710	OH2	WAT	755	30.166	28.862	39.171	1.00	11.86
	ATOM	4711	OH2	WAT	756	40.401	56.296	45.617	1.00	19.60
	ATOM	4712	OH2	WAT	757	48.250	46.266	58.848	1.00	15.18
	ATOM	4713	OH2	WAT	758	23.481	22.074	39.456	1.00	13.04
	ATOM	4714	OH2	WAT	759	39.537	29.868	42.153	1.00	13.71
55	ATOM	4715	OH2	WAT	760	41.465	55.169	34.794	1.00	16.56
	ATOM	4716	OH2	WAT	761	50.211	32.756	35.889	1.00	22.03
	ATOM	4717	OH2	WAT	762	55.270	39.776	52.027	1.00	16.82
	ATOM	4718	OH2	WAT	763	17.787	47.082	45.179	1.00	17.96
	ATOM	4719	OH2	WAT	764	41.349	43.344	47.624	1.00	13.85
60	ATOM	4720	OH2	WAT	765	31.365	48.033	33.699	1.00	17.60
	ATOM	4721	OH2	WAT	766	35.820	29.185	13.398	1.00	14.60

	ATOM	4722	2	WAT	767	42.075	46.950	49.100	1.00	18.28
	ATOM	4723	OH2	WAT	768	40.009	19.530	28.487	1.00	17.39
	ATOM	4724	OH2	WAT	770	52.878	28.814	13.591	1.00	22.84
	ATOM	4725	OH2	WAT	771	39.380	57.861	40.522	1.00	20.88
5	ATOM	4726	OH2	WAT	772	34.750	20.720	49.137	1.00	24.09
	ATOM	4727	OH2	WAT	773	17.366	31.093	38.464	1.00	23.54
	ATOM	4728	OH2	WAT	774	44.804	23.924	14.000	1.00	19.88
	ATOM	4729	OH2	WAT	775	31.146	56.380	49.556	1.00	21.05
	ATOM	4730	OH2	WAT	776	46.715	56.401	46.506	1.00	19.22
10	ATOM	4731	OH2	WAT	777	42.869	58.288	37.166	1.00	15.61
	ATOM	4732	OH2	WAT	778	40.831	33.557	7.130	1.00	24.79
	ATOM	4733	OH2	WAT	779	35.162	52.317	73.577	1.00	20.05
	ATOM	4734	OH2	WAT	780	14.809	39.247	36.520	1.00	18.70
	ATOM	4735	OH2	WAT	781	39.527	31.879	53.125	1.00	13.72
15	ATOM	4736	OH2	WAT	782	27.757	50.041	53.223	1.00	27.53
	ATOM	4737	OH2	WAT	783	49.394	26.247	11.787	1.00	19.81
	ATOM	4738	OH2	WAT	784	44.777	26.399	15.119	1.00	21.30
	ATOM	4739	OH2	WAT	785	57.867	38.875	52.198	1.00	18.47
	ATOM	4740	OH2	WAT	786	34.155	51.047	61.985	1.00	19.93
20	ATOM	4741	OH2	WAT	787	45.141	27.154	46.412	1.00	22.42
	ATOM	4742	OH2	WAT	788	43.475	51.366	28.087	1.00	18.86
	ATOM	4743	OH2	WAT	789	20.668	25.724	29.782	1.00	24.21
	ATOM	4744	OH2	WAT	790	32.083	32.320	15.051	1.00	19.38
	ATOM	4745	OH2	WAT	791	49.913	48.449	23.710	1.00	18.63
25	ATOM	4746	OH2	WAT	792	42.785	27.563	47.669	1.00	25.09
	ATOM	4747	OH2	WAT	793	39.850	53.780	46.033	1.00	22.72
	ATOM	4748	OH2	WAT	794	27.466	13.978	27.601	1.00	20.70
	ATOM	4749	OH2	WAT	795	40.190	34.656	11.736	1.00	32.79
	ATOM	4750	OH2	WAT	796	39.109	10.985	33.519	1.00	22.45
30	ATOM	4751	OH2	WAT	797	27.558	21.410	51.556	1.00	17.72
	ATOM	4752	OH2	WAT	798	66.163	40.174	37.797	1.00	19.68
	ATOM	4753	OH2	WAT	799	22.819	49.816	39.224	1.00	23.29
	ATOM	4754	OH2	WAT	800	25.950	37.105	65.162	1.00	25.58
	ATOM	4755	OH2	WAT	801	34.253	10.439	28.187	1.00	25.36
35	ATOM	4756	OH2	WAT	802	59.840	33.669	44.222	1.00	19.20
	ATOM	4757	OH2	WAT	803	38.496	20.697	31.902	1.00	16.24
	ATOM	4758	OH2	WAT	804	40.729	21.319	12.133	1.00	28.36
	ATOM	4759	OH2	WAT	805	56.117	41.173	25.206	1.00	19.73
	ATOM	4760	OH2	WAT	806	37.047	26.923	50.890	1.00	22.30
40	ATOM	4761	OH2	WAT	807	42.476	46.612	21.569	1.00	21.24
	ATOM	4762	OH2	WAT	808	35.171	28.146	10.829	1.00	23.83
	ATOM	4763	OH2	WAT	809	29.225	19.649	23.377	1.00	20.44
	ATOM	4764	OH2	WAT	810	52.753	51.832	57.912	1.00	24.14
	ATOM	4765	OH2	WAT	811	53.307	37.708	61.763	1.00	20.90
45	ATOM	4766	OH2	WAT	812	11.971	34.982	48.268	1.00	25.05
	ATOM	4767	OH2	WAT	813	24.990	48.789	37.974	1.00	24.58
	ATOM	4768	OH2	WAT	814	43.951	19.262	20.770	1.00	21.14
	ATOM	4769	OH2	WAT	815	36.259	14.934	14.740	1.00	22.42
	ATOM	4770	OH2	WAT	816	35.820	12.642	25.488	1.00	20.65
50	ATOM	4771	OH2	WAT	817	39.436	55.386	36.440	1.00	12.53
	ATOM	4772	OH2	WAT	818	62.583	34.233	30.419	1.00	22.07
	ATOM	4773	OH2	WAT	819	19.790	54.852	50.868	1.00	29.06
	ATOM	4774	OH2	WAT	820	50.697	29.832	12.471	1.00	22.39
	ATOM	4775	OH2	WAT	821	27.847	56.381	70.315	1.00	23.46
55	ATOM	4776	OH2	WAT	823	27.949	17.733	50.193	1.00	31.12
	ATOM	4777	OH2	WAT	824	55.965	37.522	32.909	1.00	17.65
	ATOM	4778	OH2	WAT	825	9.432	31.570	48.180	1.00	32.33
	ATOM	4779	OH2	WAT	826	41.473	54.399	62.185	1.00	30.40
	ATOM	4780	OH2	WAT	827	50.992	18.343	24.030	1.00	25.41
60	ATOM	4781	OH2	WAT	828	26.053	14.477	12.460	1.00	20.39
	ATOM	4782	OH2	WAT	829	69.827	44.579	41.736	1.00	22.45

	ATOM	4783	OH2	WAT	830	56.552	22.658	664	1.00	27.42
	ATOM	4784	OH2	WAT	831	26.288	20.159	49.712	1.00	24.06
	ATOM	4785	OH2	WAT	832	16.705	33.141	51.058	1.00	19.06
	ATOM	4786	OH2	WAT	833	21.271	53.952	59.470	1.00	23.51
5	ATOM	4787	OH2	WAT	834	47.427	53.353	64.227	1.00	34.99
	ATOM	4788	OH2	WAT	835	45.817	26.456	42.450	1.00	37.42
	ATOM	4789	OH2	WAT	836	49.720	39.114	12.538	1.00	29.15
	ATOM	4790	OH2	WAT	837	36.955	41.394	51.137	1.00	26.94
	ATOM	4791	OH2	WAT	838	42.624	25.634	37.851	1.00	23.28
10	ATOM	4792	OH2	WAT	839	51.315	24.980	58.259	1.00	30.21
	ATOM	4793	OH2	WAT	840	54.566	56.838	50.490	1.00	30.20
	ATOM	4794	OH2	WAT	841	40.512	53.418	32.693	1.00	26.12
	ATOM	4795	OH2	WAT	842	26.362	47.983	54.146	1.00	26.40
	ATOM	4796	OH2	WAT	843	37.201	32.434	54.478	1.00	19.11
15	ATOM	4797	OH2	WAT	844	57.961	39.008	32.080	1.00	20.99
	ATOM	4798	OH2	WAT	845	18.271	24.342	44.501	1.00	22.93
	ATOM	4799	OH2	WAT	846	41.486	21.860	67.124	1.00	40.66
	ATOM	4800	OH2	WAT	847	13.917	29.508	37.265	1.00	42.07
	ATOM	4801	OH2	WAT	848	17.295	33.378	57.585	1.00	24.15
20	ATOM	4802	OH2	WAT	849	22.558	38.571	32.120	1.00	36.71
	ATOM	4803	OH2	WAT	850	35.628	59.228	37.704	1.00	24.98
	ATOM	4804	OH2	WAT	851	24.241	59.727	65.168	1.00	27.57
	ATOM	4805	OH2	WAT	852	30.466	55.002	34.566	1.00	20.81
	ATOM	4806	OH2	WAT	853	39.487	26.456	44.048	1.00	27.56
25	ATOM	4807	OH2	WAT	854	32.107	46.093	71.751	1.00	28.54
	ATOM	4808	OH2	WAT	855	48.700	24.975	15.218	1.00	27.62
	ATOM	4809	OH2	WAT	856	71.051	37.353	44.254	1.00	24.64
	ATOM	4810	OH2	WAT	857	18.705	30.001	40.624	1.00	24.61
	ATOM	4811	OH2	WAT	858	67.822	43.137	39.600	1.00	24.92
30	ATOM	4812	OH2	WAT	859	28.879	64.576	58.006	1.00	30.86
	ATOM	4813	OH2	WAT	860	50.121	23.822	38.157	1.00	29.74
	ATOM	4814	OH2	WAT	861	50.504	23.835	16.516	1.00	41.06
	ATOM	4815	OH2	WAT	862	50.897	18.482	46.813	1.00	28.35
	ATOM	4816	OH2	WAT	863	54.681	37.002	16.795	1.00	25.10
35	ATOM	4817	OH2	WAT	864	23.493	23.940	53.772	1.00	22.53
	ATOM	4818	OH2	WAT	865	33.356	54.985	26.024	1.00	43.50
	ATOM	4819	OH2	WAT	866	43.404	31.760	41.951	1.00	21.02
	ATOM	4820	OH2	WAT	867	28.231	42.794	54.526	1.00	30.76
	ATOM	4821	OH2	WAT	868	14.847	43.548	34.779	1.00	34.44
40	ATOM	4822	OH2	WAT	869	14.659	39.207	57.645	1.00	33.41
	ATOM	4823	OH2	WAT	870	57.510	37.601	64.872	1.00	30.64
	ATOM	4824	OH2	WAT	871	20.651	32.033	29.682	1.00	28.82
	ATOM	4825	OH2	WAT	872	52.056	50.326	27.360	1.00	24.49
	ATOM	4826	OH2	WAT	873	51.657	35.863	62.500	1.00	26.14
45	ATOM	4827	OH2	WAT	874	47.279	21.024	51.484	1.00	23.69
	ATOM	4828	OH2	WAT	875	29.576	44.197	56.830	1.00	26.36
	ATOM	4829	OH2	WAT	876	40.524	18.980	31.059	1.00	25.48
	ATOM	4830	OH2	WAT	877	56.572	42.868	23.278	1.00	31.20
	ATOM	4831	OH2	WAT	878	34.210	18.018	53.038	1.00	32.11
50	ATOM	4832	OH2	WAT	879	27.258	18.647	26.109	1.00	26.96
	ATOM	4833	OH2	WAT	880	62.773	54.373	39.531	1.00	36.25
	ATOM	4834	OH2	WAT	881	35.089	9.269	50.485	1.00	38.55
	ATOM	4835	OH2	WAT	882	38.082	57.888	33.414	1.00	23.60
	ATOM	4836	OH2	WAT	883	20.570	20.572	35.734	1.00	30.32
55	ATOM	4837	OH2	WAT	884	64.060	48.729	47.598	1.00	25.68
	ATOM	4838	OH2	WAT	885	61.993	33.237	54.293	1.00	38.10
	ATOM	4839	OH2	WAT	886	46.176	15.310	31.633	1.00	32.63
	ATOM	4840	OH2	WAT	887	14.968	50.857	53.881	1.00	42.97
	ATOM	4841	OH2	WAT	888	21.704	24.366	51.887	1.00	36.24
60	ATOM	4842	OH2	WAT	889	39.839	19.775	14.153	1.00	24.51
	ATOM	4843	OH2	WAT	890	44.365	68.561	56.122	1.00	31.90

	ATOM	4844	OH2	WAT	891	47.553	30.301	39.108	1.00	25.30
	ATOM	4845	OH2	WAT	892	32.268	20.759	14.108	1.00	23.29
	ATOM	4846	OH2	WAT	893	69.343	41.988	48.078	1.00	32.22
	ATOM	4847	OH2	WAT	894	24.297	15.185	41.737	1.00	31.91
5	ATOM	4848	OH2	WAT	895	30.655	11.104	25.446	1.00	26.78
	ATOM	4849	OH2	WAT	896	42.362	40.299	57.293	1.00	20.70
	ATOM	4850	OH2	WAT	898	41.774	36.340	13.554	1.00	34.25
	ATOM	4851	OH2	WAT	899	39.152	38.465	60.315	1.00	25.51
	ATOM	4852	OH2	WAT	900	41.147	24.781	9.266	1.00	37.67
10	ATOM	4853	OH2	WAT	901	69.407	36.691	46.483	1.00	26.53
	ATOM	4854	OH2	WAT	902	55.637	47.942	26.959	1.00	32.37
	ATOM	4855	OH2	WAT	903	33.913	34.460	58.201	1.00	38.45
	ATOM	4856	OH2	WAT	904	56.269	58.664	39.628	1.00	38.97
	ATOM	4857	OH2	WAT	905	57.309	45.050	24.747	1.00	30.45
15	ATOM	4858	OH2	WAT	906	67.831	30.631	34.349	1.00	30.40
	ATOM	4859	OH2	WAT	907	17.422	51.937	47.071	1.00	26.07
	ATOM	4860	OH2	WAT	908	35.633	30.975	66.612	1.00	24.07
	ATOM	4861	OH2	WAT	910	61.975	46.612	53.486	1.00	26.87
	ATOM	4862	OH2	WAT	911	47.029	38.251	67.425	1.00	30.22
20	ATOM	4863	OH2	WAT	912	60.210	33.638	26.728	1.00	31.35
	ATOM	4864	OH2	WAT	913	17.482	36.558	63.602	1.00	44.50
	ATOM	4865	OH2	WAT	914	24.128	36.324	26.146	1.00	20.37
	ATOM	4866	OH2	WAT	915	15.719	30.346	47.149	1.00	24.17
	ATOM	4867	OH2	WAT	916	23.359	62.099	63.265	1.00	40.09
25	ATOM	4868	OH2	WAT	917	50.740	48.721	64.156	1.00	39.37
	ATOM	4869	OH2	WAT	918	64.987	41.178	33.243	1.00	37.88
	ATOM	4870	OH2	WAT	919	47.126	55.164	71.884	1.00	33.61
	ATOM	4871	OH2	WAT	920	15.488	43.883	65.882	1.00	23.44
	ATOM	4872	OH2	WAT	921	37.706	50.611	24.676	1.00	33.21
30	ATOM	4873	OH2	WAT	922	37.379	23.810	9.516	1.00	34.84
	ATOM	4874	OH2	WAT	923	38.957	20.044	55.559	1.00	43.10
	ATOM	4875	OH2	WAT	924	24.959	16.071	14.898	1.00	34.26
	ATOM	4876	OH2	WAT	925	22.429	16.629	37.874	1.00	31.87
	ATOM	4877	OH2	WAT	926	29.356	53.921	43.835	1.00	38.69
35	ATOM	4878	OH2	WAT	927	60.523	35.360	57.102	1.00	40.12
	ATOM	4879	OH2	WAT	928	29.303	20.134	16.704	1.00	26.85
	ATOM	4880	OH2	WAT	929	19.799	33.303	59.063	1.00	32.03
	ATOM	4881	OH2	WAT	930	19.367	18.997	32.033	1.00	30.19
	ATOM	4882	OH2	WAT	931	48.165	22.382	58.513	1.00	36.12
40	ATOM	4883	OH2	WAT	932	43.741	63.487	53.233	1.00	33.28
	ATOM	4884	OH2	WAT	933	33.863	20.218	11.695	1.00	26.21
	ATOM	4885	OH2	WAT	934	49.235	59.976	52.718	1.00	28.98
	ATOM	4886	OH2	WAT	935	63.989	32.978	44.987	1.00	35.98
	ATOM	4887	OH2	WAT	936	38.155	21.333	49.259	1.00	27.87
45	ATOM	4888	OH2	WAT	937	28.080	14.345	39.095	1.00	31.98
	ATOM	4889	OH2	WAT	938	15.034	38.648	61.496	1.00	35.94
	ATOM	4890	OH2	WAT	939	58.771	42.322	58.976	1.00	26.19
	ATOM	4891	OH2	WAT	940	47.485	42.154	69.878	1.00	35.48
	ATOM	4892	OH2	WAT	941	26.602	32.519	69.106	1.00	23.36
50	ATOM	4893	OH2	WAT	942	28.022	17.338	22.711	1.00	31.24
	ATOM	4894	OH2	WAT	943	26.711	49.956	71.239	1.00	38.80
	ATOM	4895	OH2	WAT	944	64.021	22.891	42.685	1.00	33.14
	ATOM	4896	OH2	WAT	945	47.677	33.744	7.930	1.00	25.60
	ATOM	4897	OH2	WAT	946	34.908	23.405	49.212	1.00	24.56
55	ATOM	4898	OH2	WAT	947	46.968	46.697	68.856	1.00	35.00
	ATOM	4899	OH2	WAT	948	41.692	11.412	30.635	1.00	31.37
	ATOM	4900	OH2	WAT	949	34.423	48.837	63.936	1.00	25.42
	ATOM	4901	OH2	WAT	950	38.612	61.793	51.417	1.00	33.87
	ATOM	4902	OH2	WAT	951	45.067	50.306	71.708	1.00	44.52
60	ATOM	4903	OH2	WAT	952	46.249	23.672	42.556	1.00	31.95
	ATOM	4904	OH2	WAT	953	22.948	57.447	63.178	1.00	39.30

	ATOM	4905	OH2 WAT	954	53.305	20.101	53.868	1.00	41.13
	ATOM	4906	OH2 WAT	955	39.320	63.985	53.074	1.00	28.86
	ATOM	4907	OH2 WAT	956	20.574	21.558	47.751	1.00	30.99
	ATOM	4908	OH2 WAT	957	70.490	44.479	44.539	1.00	22.23
5	ATOM	4909	OH2 WAT	958	13.638	23.050	34.936	1.00	28.58
	ATOM	4910	OH2 WAT	959	61.304	38.113	59.657	1.00	31.77
	ATOM	4911	OH2 WAT	960	70.418	49.240	43.244	1.00	47.36
	ATOM	4912	OH2 WAT	961	27.272	13.615	45.529	1.00	35.16
	ATOM	4913	OH2 WAT	962	40.595	52.830	28.676	1.00	35.25
10	ATOM	4914	OH2 WAT	963	41.406	39.978	15.308	1.00	23.02
	ATOM	4915	OH2 WAT	964	47.358	18.488	60.102	1.00	48.76
	ATOM	4916	OH2 WAT	965	30.061	44.962	27.407	1.00	28.02
	ATOM	4917	OH2 WAT	966	69.978	22.947	32.361	1.00	35.17
	ATOM	4918	OH2 WAT	967	54.106	56.970	32.477	1.00	27.90
15	ATOM	4919	OH2 WAT	968	48.115	18.063	53.954	1.00	37.64
	ATOM	4920	OH2 WAT	969	38.320	16.416	14.841	1.00	28.53
	ATOM	4921	OH2 WAT	970	29.037	12.266	32.860	1.00	24.29
	ATOM	4922	OH2 WAT	971	29.314	35.536	60.124	1.00	39.44
	ATOM	4923	OH2 WAT	972	47.444	23.555	12.870	1.00	36.87
20	ATOM	4924	OH2 WAT	973	40.389	49.471	57.522	1.00	28.51
	ATOM	4925	OH2 WAT	974	47.998	48.009	65.323	1.00	45.77
	ATOM	4926	OH2 WAT	975	38.192	25.689	48.335	1.00	36.54
	ATOM	4927	OH2 WAT	976	22.607	20.057	46.747	1.00	33.16
	ATOM	4928	OH2 WAT	977	37.372	23.697	52.106	1.00	21.54
25	ATOM	4929	OH2 WAT	978	33.554	55.985	48.705	1.00	26.17
	ATOM	4930	OH2 WAT	979	48.510	43.090	21.681	1.00	30.35
	ATOM	4931	OH2 WAT	980	47.263	49.883	23.397	1.00	41.75
	ATOM	4932	OH2 WAT	981	19.519	18.617	44.162	1.00	42.73
	ATOM	4933	OH2 WAT	982	37.700	6.935	33.344	1.00	44.09
30	ATOM	4934	OH2 WAT	983	44.887	20.648	40.251	1.00	45.35
	ATOM	4935	OH2 WAT	984	67.007	44.355	29.244	1.00	44.80
	ATOM	4936	OH2 WAT	985	65.458	35.373	34.954	1.00	44.52
	ATOM	4937	OH2 WAT	986	30.989	20.633	65.111	1.00	35.79
	ATOM	4938	OH2 WAT	987	26.918	36.574	22.781	1.00	35.02
35	ATOM	4939	OH2 WAT	988	19.103	25.427	48.338	1.00	25.31
	ATOM	4940	OH2 WAT	989	47.801	58.546	30.861	1.00	32.01
	ATOM	4941	OH2 WAT	990	33.665	57.659	31.778	1.00	36.66
	ATOM	4942	OH2 WAT	991	60.170	48.247	52.476	1.00	32.47
	ATOM	4943	OH2 WAT	993	63.978	36.551	52.728	1.00	34.68
40	ATOM	4944	OH2 WAT	994	29.804	56.958	72.469	1.00	49.60
	ATOM	4945	OH2 WAT	995	9.989	39.449	62.826	1.00	44.68
	ATOM	4946	OH2 WAT	996	36.235	28.967	7.281	1.00	44.34
	ATOM	4947	OH2 WAT	997	49.505	50.913	30.172	1.00	29.44
	ATOM	4948	OH2 WAT	998	11.062	37.216	34.519	1.00	29.29
45	ATOM	4949	OH2 WAT	999	44.702	22.987	39.107	1.00	36.93
	ATOM	4950	OH2 WAT	1000	50.857	38.850	67.888	1.00	36.37
	ATOM	4951	OH2 WAT	1002	60.252	35.317	28.988	1.00	29.45
	ATOM	4952	OH2 WAT	1003	20.726	30.784	57.864	1.00	29.69
	ATOM	4953	OH2 WAT	1004	20.309	29.029	31.082	1.00	23.76
50	ATOM	4954	OH2 WAT	1005	21.059	52.048	61.212	1.00	28.93
	ATOM	4955	OH2 WAT	1006	44.854	20.536	43.319	1.00	44.76
	ATOM	4956	OH2 WAT	1007	19.996	28.678	33.868	1.00	30.03
	ATOM	4957	OH2 WAT	1008	33.822	36.086	54.053	1.00	31.99
	ATOM	4958	OH2 WAT	1009	53.120	30.359	35.501	1.00	32.80
55	ATOM	4959	OH2 WAT	1010	54.882	53.339	33.303	1.00	30.28
	ATOM	4960	OH2 WAT	1012	55.781	39.618	64.945	1.00	34.34
	ATOM	4961	OH2 WAT	1013	48.371	45.507	17.871	1.00	36.20
	ATOM	4962	OH2 WAT	1014	66.334	38.117	49.319	1.00	23.90
	ATOM	4963	OH2 WAT	1015	16.758	47.920	39.004	1.00	37.89
60	ATOM	4964	OH2 WAT	1016	54.280	18.755	56.686	1.00	52.80
	ATOM	4965	OH2 WAT	1017	31.023	49.906	52.390	1.00	45.47

	ATOM	4965	OH2	WAT	1018	12.055	42.758	50.614	1.00	49.35
	ATOM	4967	OH2	WAT	1019	31.945	53.747	53.015	1.00	35.87
	ATOM	4968	OH2	WAT	1020	13.807	43.996	63.471	1.00	38.90
5	ATOM	4969	OH2	WAT	1021	55.521	22.445	54.252	1.00	28.52
	ATOM	4970	OH2	WAT	1022	17.175	28.274	38.843	1.00	32.21
	ATOM	4971	OH2	WAT	1024	36.313	20.402	51.637	1.00	43.69
	ATOM	4972	OH2	WAT	1025	48.801	20.762	30.306	1.00	24.61
	ATOM	4973	OH2	WAT	1026	40.208	59.687	47.657	1.00	44.52
10	ATOM	4974	OH2	WAT	1027	14.148	45.044	52.430	1.00	40.64
	ATOM	4975	OH2	WAT	1028	38.755	17.199	55.396	1.00	42.40
	ATOM	4976	OH2	WAT	1029	62.000	22.562	29.636	1.00	43.07
	ATOM	4977	OH2	WAT	1030	20.078	45.714	34.052	1.00	44.28
	ATOM	4978	OH2	WAT	1031	63.279	47.962	24.894	1.00	31.08
15	ATOM	4979	OH2	WAT	1032	35.585	5.069	31.352	1.00	35.03
	ATOM	4980	OH2	WAT	1033	29.682	34.108	53.939	1.00	26.25
	ATOM	4981	OH2	WAT	1034	46.780	38.540	9.889	1.00	51.06
	ATOM	4982	OH2	WAT	1035	44.882	34.636	67.334	1.00	46.95
	ATOM	4983	OH2	WAT	1036	37.415	12.859	50.188	0.50	42.02
20	ATOM	4984	OH2	WAT	1037	25.981	44.789	34.946	1.00	24.59
	ATOM	4985	OH2	WAT	1038	43.445	29.058	41.261	1.00	45.80
	ATOM	4986	OH2	WAT	1039	12.090	30.084	45.723	1.00	38.62
	ATOM	4987	OH2	WAT	1040	11.364	36.356	54.939	1.00	40.96
	ATOM	4988	OH2	WAT	1041	29.272	41.003	52.730	1.00	42.87
25	ATOM	4989	OH2	WAT	1042	37.324	27.042	8.738	1.00	46.28
	ATOM	4990	OH2	WAT	1043	57.492	28.350	30.232	1.00	46.70
	ATOM	4991	OH2	WAT	1044	15.052	49.656	56.840	1.00	37.66
	ATOM	4992	OH2	WAT	1045	46.768	51.835	70.126	1.00	51.14
	ATOM	4993	OH2	WAT	1046	33.162	57.841	46.992	1.00	41.63
30	ATOM	4994	OH2	WAT	1047	44.092	26.222	49.137	1.00	40.14
	ATOM	4995	OH2	WAT	1048	42.496	32.208	38.770	1.00	40.63
	ATOM	4996	OH2	WAT	1049	58.978	48.444	30.591	1.00	27.79
	ATOM	4997	OH2	WAT	1050	55.619	13.932	32.119	1.00	39.09
	ATOM	4998	OH2	WAT	1051	46.458	60.895	55.459	1.00	37.85
35	ATOM	4999	OH2	WAT	1052	42.873	26.465	64.734	1.00	39.73
	ATOM	5000	OH2	WAT	1053	56.101	17.530	47.784	1.00	39.99
	ATOM	5001	OH2	WAT	1054	31.203	38.751	53.971	1.00	30.66
	ATOM	5002	OH2	WAT	1055	47.563	17.129	46.637	1.00	45.01
	ATOM	5003	OH2	WAT	1056	58.815	30.610	63.372	1.00	32.58
40	ATOM	5004	OH2	WAT	1057	26.459	10.748	26.222	1.00	46.82
	ATOM	5005	OH2	WAT	1058	45.017	29.344	39.141	1.00	43.86
	ATOM	5006	OH2	WAT	1059	26.313	26.119	59.271	1.00	36.72
	ATOM	5007	OH2	WAT	1061	28.236	58.748	55.454	1.00	30.55
	ATOM	5008	OH2	WAT	1062	61.906	32.814	43.031	1.00	29.09
45	ATOM	5009	OH2	WAT	1063	69.011	47.015	42.506	1.00	28.30
	ATOM	5010	OH2	WAT	1066	52.729	54.024	56.720	1.00	49.30
	ATOM	5011	OH2	WAT	1068	44.439	16.568	20.527	1.00	40.67
	ATOM	5012	OH2	WAT	1070	45.820	25.970	61.887	1.00	41.07
	ATOM	5013	OH2	WAT	1071	60.712	46.310	28.186	0.50	40.28
50	ATOM	5014	OH2	WAT	1072	36.208	36.373	12.341	1.00	29.35
	ATOM	5015	OH2	WAT	1073	35.114	41.414	67.958	1.00	46.06
	ATOM	5016	OH2	WAT	1074	65.518	34.727	51.474	1.00	29.02
	ATOM	5017	OH2	WAT	1075	13.571	35.140	58.001	1.00	38.14
	ATOM	5018	OH2	WAT	1076	34.047	38.447	58.618	1.00	35.93
55	ATOM	5019	OH2	WAT	1077	48.507	37.783	69.502	1.00	45.44
	ATOM	5020	OH2	WAT	1078	41.210	38.536	55.002	0.50	37.11
	ATOM	5021	OH2	WAT	1079	29.344	38.728	22.988	1.00	40.16
	ATOM	5022	OH2	WAT	1080	14.136	37.604	50.804	1.00	38.19
	ATOM	5023	OH2	WAT	1081	48.142	54.501	25.745	1.00	36.15
60	ATOM	5024	OH2	WAT	1082	40.910	25.680	40.947	1.00	20.33
	ATOM	5025	OH2	WAT	1083	40.233	57.746	37.797	1.00	16.93
	ATOM	5026	OH2	WAT	1084	54.670	59.272	48.665	1.00	32.72

	ATOM	5027	OH2 WAT	1085	53.699	57.790	54.833	1.00	30.15
	ATOM	5028	OH2 WAT	1086	16.670	32.247	54.833	1.00	41.51
	ATOM	5029	OH2 WAT	1087	22.296	31.936	27.500	1.00	28.36
	ATOM	5030	OH2 WAT	1088	47.914	17.001	32.454	1.00	37.63
5	ATOM	5031	OH2 WAT	1089	57.985	47.492	28.231	1.00	32.60
	ATOM	5032	OH2 WAT	1090	35.749	34.442	55.271	1.00	34.51
	ATOM	5033	OH2 WAT	1091	31.476	35.919	55.030	1.00	29.00
	ATOM	5034	OH2 WAT	1092	57.549	59.850	42.071	1.00	37.12
	ATOM	5035	OH2 WAT	1093	37.244	31.058	68.548	1.00	28.12
10	ATOM	5036	OH2 WAT	1094	37.707	33.592	70.255	1.00	33.05
	ATOM	5037	OH2 WAT	1095	65.341	43.727	34.421	1.00	39.40
	ATOM	5038	OH2 WAT	1096	29.571	56.164	45.104	1.00	27.27
	ATOM	5039	OH2 WAT	1097	28.460	20.997	19.168	1.00	29.57
	ATOM	5040	OH2 WAT	1098	18.695	33.000	61.504	1.00	27.80
15	ATOM	5041	OH2 WAT	1099	19.269	34.045	63.767	1.00	40.98
	ATOM	5042	OH2 WAT	1100	50.893	61.236	50.969	1.00	35.01
	ATOM	5043	OH2 WAT	1101	56.400	43.894	59.831	1.00	32.48
	ATOM	5044	OH2 WAT	1102	56.721	41.861	63.860	1.00	30.95
	ATOM	5045	OH2 WAT	1103	34.429	49.906	71.937	1.00	27.35
20	ATOM	5046	OH2 WAT	1104	41.246	9.747	32.571	1.00	29.28
	ATOM	5047	OH2 WAT	1105	20.981	21.798	50.939	1.00	39.38
	ATOM	5048	OH2 WAT	1106	23.739	19.876	50.550	1.00	40.52
	ATOM	5049	OH2 WAT	1107	38.769	41.131	17.011	1.00	45.24
	ATOM	5050	OH2 WAT	1108	29.718	9.526	34.248	1.00	37.08
25	ATOM	5051	OH2 WAT	1109	27.449	9.015	35.782	1.00	29.46
	ATOM	5052	OH2 WAT	1110	26.205	9.875	37.838	1.00	37.18
	ATOM	5053	OH2 WAT	1111	24.669	47.026	35.553	1.00	25.36
	ATOM	5054	OH2 WAT	1112	31.450	56.875	43.413	1.00	35.79
	ATOM	5055	OH2 WAT	1113	29.193	57.847	41.895	1.00	28.59
30	ATOM	5056	OH2 WAT	1114	48.270	62.126	54.057	1.00	47.11
	ATOM	5057	OH2 WAT	1115	25.062	58.442	56.552	1.00	44.02
	ATOM	5058	OH2 WAT	1116	22.740	60.186	60.488	1.00	34.22
	ATOM	5059	OH2 WAT	1117	39.213	37.453	56.336	1.00	40.31
	ATOM	5060	OH2 WAT	1118	38.121	40.798	59.573	1.00	43.24
35	ATOM	5061	OH2 WAT	1119	37.346	43.433	61.501	1.00	37.73
	ATOM	5062	OH2 WAT	1120	37.001	39.773	55.197	1.00	42.52
	ATOM	5063	OH2 WAT	1121	18.157	30.227	56.161	1.00	37.69
	ATOM	5064	OH2 WAT	1122	33.762	10.574	25.544	1.00	23.70
	ATOM	5065	OH2 WAT	1123	37.474	59.970	39.757	1.00	21.11
40	ATOM	5066	OH2 WAT	1124	41.061	44.584	49.861	1.00	25.81
	ATOM	5067	OH2 WAT	1125	70.442	38.041	48.255	1.00	29.55
	ATOM	5068	OH2 WAT	1126	15.491	41.776	47.873	1.00	30.31
	ATOM	5069	OH2 WAT	1127	25.212	43.116	32.288	1.00	28.62
	ATOM	5070	OH2 WAT	1128	26.383	21.154	54.156	1.00	29.70
45	ATOM	5071	OH2 WAT	1129	50.740	60.798	47.331	1.00	38.19
	ATOM	5072	OH2 WAT	1130	41.735	39.836	50.778	1.00	37.70
	ATOM	5073	OH2 WAT	1131	42.701	60.987	37.812	1.00	41.12
	ATOM	5074	OH2 WAT	1132	14.659	29.765	44.894	1.00	33.95
	ATOM	5075	OH2 WAT	1133	34.102	38.199	24.717	1.00	27.35
50	ATOM	5076	OH2 WAT	1134	45.354	44.890	68.080	1.00	31.32
	ATOM	5077	OH2 WAT	1135	35.915	44.195	50.574	1.00	32.69
	ATOM	5078	OH2 WAT	1136	15.867	48.663	59.058	1.00	34.96
	ATOM	5079	OH2 WAT	1137	15.232	36.067	62.441	1.00	39.53
	ATOM	5080	OH2 WAT	1138	24.046	35.123	64.133	1.00	33.21
55	ATOM	5081	OH2 WAT	1140	42.820	43.043	56.106	1.00	40.38
	ATOM	5082	OH2 WAT	1142	30.164	46.247	60.234	1.00	27.89
	ATOM	5083	OH2 WAT	1143	36.787	20.701	62.513	1.00	40.11
	ATOM	5084	OH2 WAT	1144	55.849	49.287	57.410	1.00	29.15
	ATOM	5085	OH2 WAT	1145	50.753	46.872	21.712	1.00	35.52
60	ATOM	5086	OH2 WAT	1146	45.737	64.613	61.498	1.00	44.87
	ATOM	5087	OH2 WAT	1147	28.723	16.491	52.376	1.00	48.22

	ATOM	5088	WAT	1148	41.105	13.562	41.800	1.00	29.30
	ATOM	5089	OH2 WAT	1149	26.685	14.349	42.039	1.00	42.43
	ATOM	5090	OH2 WAT	1150	38.358	50.484	49.443	1.00	35.16
	ATOM	5091	OH2 WAT	1151	69.920	42.965	37.954	1.00	40.56
5	ATOM	5092	OH2 WAT	1152	52.738	59.405	31.453	1.00	35.45
	ATOM	5093	OH2 WAT	1153	32.404	39.258	22.528	1.00	39.05
	ATOM	5094	OH2 WAT	1154	22.666	50.694	36.768	1.00	36.83
	ATOM	5095	OH2 WAT	1155	14.698	50.360	47.308	1.00	38.90
	ATOM	5096	OH2 WAT	1156	39.143	11.155	36.210	1.00	39.07
10	ATOM	5097	OH2 WAT	1157	55.657	18.795	54.147	1.00	34.85
	ATOM	5098	OH2 WAT	1158	62.362	32.941	24.043	1.00	41.87
	ATOM	5099	OH2 WAT	1159	29.902	43.547	51.918	1.00	32.04
	ATOM	5100	OH2 WAT	1160	26.171	30.161	18.201	1.00	39.60
	ATOM	5101	OH2 WAT	1161	41.218	21.756	70.370	1.00	41.36
15	ATOM	5102	OH2 WAT	1162	26.190	30.492	28.185	1.00	27.88
	ATOM	5103	OH2 WAT	1163	50.602	53.898	30.780	1.00	30.62
	ATOM	5104	OH2 WAT	1164	26.955	17.640	16.849	1.00	31.56
	ATOM	5105	OH2 WAT	1165	41.691	10.374	28.028	1.00	32.37
	ATOM	5106	OH2 WAT	1166	57.418	56.385	51.476	1.00	35.94
20	ATOM	5107	OH2 WAT	1167	55.642	43.654	62.253	1.00	41.27
	ATOM	5108	OH2 WAT	1168	41.479	56.703	63.461	1.00	34.93
	ATOM	5109	OH2 WAT	1169	39.613	58.154	43.178	1.00	35.49
	ATOM	5110	OH2 WAT	1170	45.356	56.475	68.496	1.00	37.27
	ATOM	5111	OH2 WAT	1171	44.916	53.775	27.876	1.00	31.35
25	ATOM	5112	OH2 WAT	1172	25.722	27.696	18.138	1.00	38.58
	ATOM	5113	OH2 WAT	1173	43.375	49.025	22.195	1.00	33.80
	ATOM	5114	OH2 WAT	1174	21.889	34.531	26.210	1.00	36.18
	ATOM	5115	OH2 WAT	1175	41.736	39.433	59.697	1.00	36.02
	ATOM	5116	OH2 WAT	1176	47.436	28.894	63.907	1.00	33.93
30	ATOM	5117	OH2 WAT	1177	28.538	47.783	33.721	1.00	39.02
	ATOM	5118	OH2 WAT	1178	45.541	19.730	50.210	1.00	43.10
	ATOM	5119	OH2 WAT	1179	68.291	39.466	47.597	1.00	37.89
	ATOM	5120	OH2 WAT	1180	66.025	32.351	42.560	1.00	35.69
	ATOM	5121	OH2 WAT	1181	61.703	29.189	16.524	1.00	36.27
35	ATOM	5122	OH2 WAT	1182	14.548	30.540	42.421	1.00	42.06
	ATOM	5123	OH2 WAT	1183	15.496	27.270	47.838	1.00	46.85
	ATOM	5124	OH2 WAT	1184	14.095	47.673	48.381	1.00	47.62
	ATOM	5125	OH2 WAT	1185	47.204	19.227	33.252	1.00	36.81
	ATOM	5126	OH2 WAT	1186	15.661	33.106	31.093	1.00	46.85
40	ATOM	5127	OH2 WAT	1187	67.150	47.220	39.295	1.00	36.46
	ATOM	5128	OH2 WAT	1188	29.557	22.635	20.946	1.00	41.67
	ATOM	5129	OH2 WAT	1189	28.682	26.265	60.679	1.00	46.57
	ATOM	5130	OH2 WAT	1190	17.693	23.606	49.850	1.00	36.98
	ATOM	5131	OH2 WAT	1191	51.486	56.952	54.132	1.00	32.03
45	ATOM	5132	OH2 WAT	1192	55.843	23.209	25.565	1.00	44.63
	ATOM	5133	OH2 WAT	1193	43.669	45.262	17.620	1.00	41.89
	ATOM	5134	OH2 WAT	1194	36.029	14.373	12.084	1.00	39.33
	ATOM	5135	OH2 WAT	1195	14.318	32.026	49.337	1.00	35.36
	ATOM	5136	OH2 WAT	1196	13.222	35.202	50.716	1.00	45.32
50	ATOM	5137	OH2 WAT	1197	54.042	24.106	57.247	1.00	47.39
	ATOM	5138	OH2 WAT	1198	34.685	14.060	23.512	1.00	39.90
	ATOM	5139	OH2 WAT	1199	45.704	57.109	65.615	1.00	46.14
	ATOM	5140	OH2 WAT	1200	44.873	24.284	46.545	1.00	34.57
	ATOM	5141	OH2 WAT	1201	35.967	56.594	50.557	1.00	39.33
55	ATOM	5142	OH2 WAT	1202	30.036	57.668	47.644	1.00	37.79
	ATOM	5143	OH2 WAT	1203	49.131	18.854	41.508	1.00	42.53
	ATOM	5144	OH2 WAT	1204	30.102	43.586	25.149	1.00	40.72
	ATOM	5145	OH2 WAT	1205	16.998	53.914	48.758	1.00	48.89
	ATOM	5146	OH2 WAT	1207	22.805	15.462	43.888	1.00	41.37
60	ATOM	5147	OH2 WAT	1208	21.497	24.519	27.314	1.00	37.24
	ATOM	5148	OH2 WAT	1209	17.651	41.303	33.491	1.00	42.96

	ATOM	5149	OH2	WAT	1210	60.654	28.310	52.903	1.00	50.25
	ATOM	5150	OH2	WAT	1212	46.533	63.565	52.672	1.00	46.38
	ATOM	5151	OH2	WAT	1213	46.413	53.655	68.053	1.00	39.92
	ATOM	5152	OH2	WAT	1214	14.311	46.777	37.971	1.00	50.08
5	ATOM	5153	OH2	WAT	1216	55.429	29.530	33.565	1.00	45.03
	ATOM	5154	OH2	WAT	1217	53.478	35.792	14.453	1.00	40.11
	ATOM	5155	OH2	WAT	1218	40.345	43.339	56.627	1.00	47.78
	ATOM	5156	OH2	WAT	1219	36.529	52.046	58.807	1.00	38.42
	ATOM	5157	OH2	WAT	1220	24.511	41.919	29.518	1.00	41.70
10	ATOM	5158	OH2	WAT	1222	17.693	27.672	35.440	1.00	43.96
	ATOM	5159	OH2	WAT	1223	23.641	21.252	53.576	1.00	44.70
	ATOM	5160	OH2	WAT	1224	51.161	18.080	43.110	1.00	37.11
	ATOM	5161	OH2	WAT	1225	44.467	44.673	20.294	1.00	44.46
	ATOM	5162	OH2	WAT	1226	50.788	19.723	49.959	1.00	37.29
15	ATOM	5163	OH2	WAT	1227	54.752	25.906	65.096	1.00	46.67
	ATOM	5164	OH2	WAT	1228	63.418	32.799	51.922	1.00	39.05
	ATOM	5165	OH2	WAT	1229	49.352	29.893	33.234	1.00	44.01
	ATOM	5166	OH2	WAT	1230	31.202	38.938	20.335	1.00	49.64
	ATOM	5167	OH2	WAT	1231	33.715	51.957	58.093	1.00	40.80
20	ATOM	5168	OH2	WAT	1232	23.578	22.341	27.377	1.00	33.04
	ATOM	5169	OH2	WAT	1233	48.877	30.829	37.399	1.00	42.38
	ATOM	5170	OH2	WAT	1235	52.077	39.927	11.643	1.00	50.91
	ATOM	5171	OH2	WAT	1236	46.727	47.936	20.766	1.00	39.36
	ATOM	5172	OH2	WAT	1237	19.932	16.273	39.489	1.00	39.93
25	ATOM	5173	OH2	WAT	1239	40.814	60.178	74.599	1.00	41.48
	ATOM	5174	OH2	WAT	1240	51.750	29.763	9.713	1.00	41.37
	ATOM	5175	OH2	WAT	1241	38.610	58.856	35.877	1.00	44.28
	ATOM	5176	OH2	WAT	1242	21.432	26.708	58.173	1.00	37.52
	ATOM	5177	OH2	WAT	1243	46.966	33.870	68.743	1.00	45.93
30	ATOM	5178	OH2	WAT	1244	61.246	43.773	58.961	1.00	40.96
	ATOM	5179	OH2	WAT	1246	64.751	48.614	51.387	1.00	40.01
	ATOM	5180	OH2	WAT	1249	28.908	23.979	70.000	1.00	50.21
	ATOM	5181	OH2	WAT	1250	35.092	50.916	23.964	1.00	43.45
	ATOM	5182	OH2	WAT	1251	40.260	47.302	20.071	1.00	39.21
35	ATOM	5183	OH2	WAT	1252	35.991	60.939	52.084	1.00	42.26
	ATOM	5184	OH2	WAT	1253	27.391	37.137	20.202	1.00	43.08
	ATOM	5185	OH2	WAT	1255	12.393	50.408	52.301	0.50	37.03
	ATOM	5186	OH2	WAT	1256	23.608	55.162	64.150	1.00	41.77
	ATOM	5187	OH2	WAT	1258	47.269	17.174	22.065	1.00	46.22
40	ATOM	5188	OH2	WAT	1259	28.456	62.543	55.786	1.00	41.70
	ATOM	5189	OH2	WAT	1260	18.167	46.909	66.948	1.00	43.73
	ATOM	5190	OH2	WAT	1261	26.966	45.286	26.641	1.00	48.72
	ATOM	5191	OH2	WAT	1264	17.101	45.276	33.425	1.00	43.21
	ATOM	5192	OH2	WAT	1265	63.613	36.746	57.666	1.00	42.19
45	ATOM	5193	OH2	WAT	1266	24.775	12.094	44.611	1.00	43.78
	ATOM	5194	OH2	WAT	1267	14.567	43.639	54.809	1.00	43.19
	ATOM	5195	OH2	WAT	1268	62.111	49.250	49.919	1.00	45.57
	ATOM	5196	OH2	WAT	1269	50.495	37.209	8.544	1.00	41.23
	ATOM	5197	OH2	WAT	1270	25.496	43.939	68.768	1.00	38.89
50	ATOM	5198	OH2	WAT	1271	46.561	47.854	71.850	1.00	47.32
	ATOM	5199	OH2	WAT	1272	34.624	40.398	52.220	1.00	40.23
	ATOM	5200	OH2	WAT	1273	23.826	29.701	27.112	1.00	37.37
	ATOM	5201	OH2	WAT	1275	58.487	56.076	44.456	1.00	49.60
	ATOM	5202	OH2	WAT	1276	47.004	19.336	65.956	1.00	44.67
55	ATOM	5203	OH2	WAT	1277	35.331	60.688	71.296	1.00	49.05
	ATOM	5204	OH2	WAT	1278	64.248	43.852	53.276	1.00	45.61
	ATOM	5205	OH2	WAT	1279	38.265	60.125	44.267	1.00	40.24
	ATOM	5206	OH2	WAT	1280	32.716	19.954	61.811	1.00	48.51
	ATOM	5207	OH2	WAT	1282	37.969	28.502	70.587	1.00	45.47
60	ATOM	5208	OH2	WAT	1283	45.149	43.238	70.422	1.00	51.48
	ATOM	5209	OH2	WAT	1284	59.891	53.118	51.539	1.00	48.96

	ATOM	5210	OH2	WAT	1285	34.867	45.533	72.867	1.00	47.50
	ATOM	5211	OH2	WAT	1286	21.880	52.964	63.592	1.00	43.17
	ATOM	5212	OH2	WAT	1288	49.993	22.986	32.101	1.00	43.19
	ATOM	5213	OH2	WAT	1289	46.808	19.421	38.578	1.00	44.53
5	ATOM	5214	OH2	WAT	1290	30.906	19.264	11.986	1.00	42.77
	ATOM	5215	OH2	WAT	1293	9.566	38.464	32.587	1.00	48.38
	ATOM	5216	OH2	WAT	1294	42.359	12.879	35.960	1.00	39.40
	ATOM	5217	OH2	WAT	1296	43.735	54.908	30.034	1.00	43.21
	ATOM	5218	OH2	WAT	1298	38.663	10.988	25.018	1.00	37.95
10	ATOM	5219	OH2	WAT	1299	32.861	26.550	10.296	1.00	46.66
	ATOM	5220	OH2	WAT	1300	43.628	37.637	11.420	1.00	44.84
	ATOM	5221	OH2	WAT	1302	47.573	23.475	60.712	1.00	38.95
	ATOM	5222	OH2	WAT	1303	64.973	53.331	38.090	1.00	38.57
	ATOM	5223	OH2	WAT	1304	16.881	19.232	30.969	1.00	47.01
15	ATOM	5224	OH2	WAT	1306	48.262	21.848	19.919	1.00	44.43
	ATOM	5225	OH2	WAT	1307	11.425	37.923	51.890	1.00	34.09
	ATOM	5226	OH2	WAT	1308	63.096	29.357	20.027	1.00	40.25
	ATOM	5227	OH2	WAT	1309	23.170	21.317	25.128	1.00	38.17
	ATOM	5228	OH2	WAT	1310	20.030	19.255	25.175	1.00	29.39
20	ATOM	5229	OH2	WAT	1311	51.597	27.670	8.159	1.00	42.04
	ATOM	5230	OH2	WAT	1312	48.948	36.803	6.527	1.00	41.43
	ATOM	5231	O1	LIS	702	40.291	33.743	45.120	1.00	13.04
	ATOM	5232	O2	LIS	702	43.369	36.201	48.269	1.00	15.16
	ATOM	5233	O3	LIS	702	41.939	37.283	47.069	1.00	13.89
25	ATOM	5234	O4	LIS	702	38.843	33.368	41.867	1.00	13.99
	ATOM	5235	O5	LIS	702	40.703	32.272	42.326	1.00	11.94
	ATOM	5236	N1	LIS	702	41.897	34.063	47.266	1.00	14.83
	ATOM	5237	N2	LIS	702	41.810	34.533	43.599	1.00	13.77
	ATOM	5238	N3	LIS	702	43.329	27.774	44.087	1.00	21.85
30	ATOM	5239	C1	LIS	702	41.502	34.052	44.840	1.00	13.99
	ATOM	5240	C2	LIS	702	42.612	33.852	45.943	1.00	12.80
	ATOM	5241	C3	LIS	702	42.259	36.267	47.654	1.00	13.57
	ATOM	5242	C4	LIS	702	41.315	35.065	47.682	1.00	14.83
	ATOM	5243	C5	LIS	702	40.715	34.685	42.559	1.00	14.91
35	ATOM	5244	C6	LIS	702	41.505	35.237	41.353	1.00	14.97
	ATOM	5245	C7	LIS	702	42.826	35.369	41.680	1.00	16.22
	ATOM	5246	C8	LIS	702	43.138	34.956	43.062	1.00	12.52
	ATOM	5247	C9	LIS	702	40.081	33.284	42.224	1.00	13.82
	ATOM	5248	C10	LIS	702	43.252	32.473	45.784	1.00	14.69
40	ATOM	5249	C11	LIS	702	42.484	31.248	45.536	1.00	16.12
	ATOM	5250	C12	LIS	702	43.296	30.062	44.842	1.00	17.50
	ATOM	5251	C13	LIS	702	42.487	28.895	44.629	1.00	20.10
	ATOM	5252	C14	LIS	702	40.586	35.365	48.932	1.00	12.04
	ATOM	5253	C15	LIS	702	39.408	36.299	49.163	1.00	13.87
45	ATOM	5254	C16	LIS	702	38.847	36.401	50.549	1.00	15.99
	ATOM	5255	C17	LIS	702	38.566	35.206	51.331	1.00	14.59
	ATOM	5256	C18	LIS	702	38.016	35.319	52.656	1.00	17.75
	ATOM	5257	C19	LIS	702	37.737	36.627	53.218	1.00	18.68
	ATOM	5258	C20	LIS	702	38.014	37.822	52.443	1.00	18.46
50	ATOM	5259	C21	LIS	702	38.568	37.710	51.112	1.00	16.62
	ATOM	5260	N	GLY	2000	46.347	33.778	41.598	1.00	29.94
	ATOM	5261	CA	GLY	2000	46.605	34.757	40.562	1.00	28.86
	ATOM	5262	C	GLY	2000	46.815	34.072	39.230	1.00	29.89
	ATOM	5263	O	GLY	2000	47.218	34.695	38.260	1.00	28.89
55	ATOM	5264	ZN+2	ZN2	701	43.821	38.240	46.712	1.00	25.11
	ATOM	5265	CL	CL	703	29.172	28.069	36.210	1.00	12.41
	ATOM	5266	CL	CL	704	36.272	45.081	44.766	1.00	15.28
	END									

Sequences

Seq ID No. 1

5 WT-ACE

SQQVTVTHGTSSQATTSSQTTHQATAHQTSAQSPNLVTDEAEASKFVEEYD
RTSQVVWNEYAEANWNYNTNITTETSKILLQKNMQIANHTLKYGTQARKFD
VNQLQNTTIKRIKKVQDLERAALPAQELEEYNKILLDMETTYSVATVCHPNG
10 SCLQLEPDLTNVMATSRKYEDLLWAWEGWRDKAGRAILQFYPKYVELINQA
ARLNGYVDAGDSWRSMYETPSLEQDLERLFQELQPLYLNLHAYVRRALHRH
YGAQHINLEGPIPAHLLGNMWAQTWSNIYDLVVPFPSAPSMDDTEAMLKQG
WTPRRMFKEADFFTSLGLLPVPPEFWNKSMLEKPTDGREVVCHASAWDFY
NGKDFRIKQCTTVNLEDLVVAHHEMGHIQYFMQYKDLPVALREGANPGFHE
15 AIGDVLALS SVSTPKHLHSLNLLSSEGGSDEHDINFLMKMALDKIAFIPFSYLVD
QWRWRVFDGSITKENYNQEWWSLRLKYQGLCPPVPRTQGD FPGAKFHIPS
SVPYIRYFVSFIIQFQFHEALCQAAGHTGPLHKCDIYQSKEAGQRLATAMKLG
FSRPWPEAMQLITGQPNMSASAMLSYFKPLLDWLR TENELHGEKLGWPQYN
WTPNSARSEGPLPDSGRVSFLGLDLDAQQARVGQWLLLFLGIALLVATLGLS
20 QRLFSIRHRSLHRHSHGPQFGSEVELRHS

Seq ID No. 2

25 ACE-Δ36NJ

LVTDEAEASKFVEEYDRTSQVVWNEYAEANWNYNTNITTETSKILLQKNMQI
ANHTLKYGTQARKFDVNQLQNTTIKRIKKVQDLERAALPAQELEEYNKILLD
METTYSVATVCHPNGSCLQLEPDLTNVMATSRKYEDLLWAWEGWRDKAGR
30 AILQFYPKYVELINQAARLNGYVDAGDSWRSMYETPSLEQDLERLFQELQPL
YLNHLHAYVRRALHRHYGAQHINLEGPIPAHLLGNMWAQTWSNIYDLVVPFP
SAPSMDDTEAMLKQGWTPRRMFKEADFFTSLGLLPVPPEFWNKSMLEKPT
DGREVVCHASAWDFYNGKDFRIKQCTTVNLEDLVVAHHEMGHIQYFMQYK
DLPVALREGANPGFHEAIGDVLALS SVSTPKHLHSLNLLSSEGGSDEHDINFLM
35 KMALDKIAFIPFSYLVDQWRWRVFDGSITKENYNQEWWSLRLKYQGLCPPV
PRTQGD FPGAKFHIPSSVPYIRYFVSFIIQFQFHEALCQAAGHTGPLHKCDIY
QSKEAGQRLATAMKLGFSRPWPEAMQLITGQPNMSASAMLSYFKPLLDWLR
TE
NELHGEKLGWPQYNWTPNS
40

CLAIMS

1. A crystal of ACE protein.
- 5 2. A crystal according to claim 1 wherein the ACE protein is underglycosylated.
3. A crystal according to claim 2 wherein the ACE protein is underglycosylated by removing one or more glycosylation sites and/or one or more partially glycosylated sites.
- 10 4. A crystal according to claim 3 wherein the underglycosylated ACE protein comprises a mutation at amino acid 337 or amino acid 90, 109, 155, 337 and 586 of SEQ ID No 2.
- 15 5. A crystal according to any one of the preceding claims comprising atoms arranged in a spatial relationship represented by at least a portion of the structure co-ordinates of Table A or Table B.
- 20 6. A crystal according to any one of the preceding claims wherein the crystal belongs to the space group $P2_12_12_1$.
7. A crystal according to any one of the preceding claims having unit cell dimensions of: $a=56.47 \text{ \AA}$, $b=84.90 \text{ \AA}$, $c=133.99 \text{ \AA}$.
- 25 8. A crystal according to any one of the preceding claims wherein the crystal is a crystal of human ACE protein.
9. A crystal according to any one of the preceding claims wherein the crystal further comprises an entity bound to the ACE protein or a portion thereof.
- 30 10. A crystal according to claim 9 wherein the entity is bound to the ACE protein or a portion thereof by contacting one or more residues of the ACE protein selected from: His384, Ala385, Lys542, Tyr551, Tyr554, Glu415 and His544.

11. A crystal according to claim 9 or claim 10 wherein the entity modulates the activity of ACE.
- 5 12. A crystal according to claim 11 wherein the entity is an inhibitor of ACE.
13. A crystal according to claim 12 wherein the inhibitor of ACE is lisinopril or a derivative thereof.
- 10 14. A crystal according to claim 13 comprising atoms arranged in a spatial relationship represented by at least a portion of the structure co-ordinates of Table B.
15. A method of preparing a crystal of ACE protein comprising the steps of:
- 15 (a) culturing host cells comprising an underglycosylated ACE protein;
(b) purifying the underglycosylated ACE protein; and
(c) crystallising the underglycosylated ACE protein.
16. A method according to claim 15 wherein the ACE protein is
20 underglycosylated by removing one or more glycosylation sites and/or one or more partially glycosylated sites.
17. A method according to claim 15 or claim 16 wherein the underglycosylated ACE protein comprises a mutation at amino acid 337 of SEQ ID No 2 or amino acids
25 90, 109, 155, 337 and 586 of SEQ ID No 2.
18. A method according to any of claims 15 to 17 wherein the ACE protein is crystallised using about 10 mM HEPES and about 0.1% PMSF with an equal volume of a reservoir solution containing about 15 % PEG 4000, about 50 mM
30 $\text{CH}_3\text{COONa} \cdot 3\text{H}_2\text{O}$ pH 4.7 and about 10 μM $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$.
19. A method according to any of claims 15 to 18 wherein the crystal that is prepared has a structure defined by at least a portion of the structure co-ordinates of Table A.

20. A method according to any of claims 15 to 19 wherein the crystal belongs to the space group $P2_12_12_1$.
- 5 21. A method according to any of claims 15 to 20 wherein the crystal has the unit cell dimensions: $a=56.47 \text{ \AA}$, $b=84.90 \text{ \AA}$ and $c=133.99 \text{ \AA}$.
22. A method according to any of claims 15 to 21 wherein the ACE protein is human ACE protein.
- 10 23. A method according to any of claims 15 to 22 wherein the ACE protein is crystallised in the presence of an entity.
24. A method according to claim 23 wherein the entity is a modulator of ACE.
- 15 25. A method according to claim 24 wherein the entity is an inhibitor of ACE.
26. A method according to claim 25 wherein the inhibitor of ACE is lisinopril or a derivative thereof.
- 20 27. A method according to claim 26 wherein the crystal that is prepared has a structure defined by at least a portion of the structure co-ordinates of Table B.
28. A method of screening for a modulator of ACE wherein the method comprises
25 the use of a crystal according to any of claims 1-14.
29. A method according to claim 28 comprising the steps of:
- (a) providing at least a portion of the structure co-ordinates of Table A or Table B;
- 30 (b) employing at least a portion of the structure co-ordinates of Table A or Table B to design or select or synthesise a putative modulator of ACE;

(c) contacting the putative modulator of ACE with ACE or a mutant, variant, homologue, derivative or fragment thereof in the presence of a substrate; and

(d) screening the putative modulator of ACE in an assay for the potential to modulate
5 ACE.

30. A method according to claim 29 wherein at least a portion of the structure co-ordinates of Table A or Table B and/or the putative modulator of ACE and/or the substrate are provided on a machine-readable data storage medium comprising a data
10 storage material encoded with machine readable data.

31. A method according to claim 29 or claim 30 wherein the putative ACE modulator is from a library of compounds.

15 32. A method according claim 29 or claim 30 wherein the putative ACE modulator is selected from a database.

33. A method according to claim 29 or claim 30 wherein the putative ACE modulator is designed *de novo*.

20

34. A method according to claim 29 or claim 30 wherein the putative ACE modulator is designed from a known ACE modulator.

35. A method according to claim 29 or claim 30 wherein the design or selection of
25 the putative ACE modulator is performed in conjunction with computer modelling.

36. A method according to any of claims 28 to 35 wherein the ACE modulator is useful in the prevention and/or treatment of an ACE related disorder.

30 37. A method according to claim 36 wherein the ACE related disorder is hypertension.

38. A process comprising the steps of:

- (a) performing the method according to any of claims 28 to 36;
- (b) identifying one or more modulators of ACE; and
- 5 (c) preparing a quantity of those one or more ACE modulators.

39. A process comprising the steps of:

- (a) performing the method according to any of claims 28 to 36;
- 10 (b) identifying one or more ACE modulators; and
- (c) preparing a pharmaceutical composition comprising those one or more identified ACE modulators.

15

40. A process comprising the steps of:

- (a) performing the method according to any of claims 28 to 36;
- 20 (b) identifying one or more ACE modulators;
- (c) modifying those one or more ACE modulators; and
- (d) optionally preparing a pharmaceutical composition comprising those one or
25 more ACE modulators.

41. A method of obtaining structural information about a molecule or a molecular complex of unknown structure by using at least a portion of the structure co-ordinates of ACE, comprising the steps of:

30

- (a) generating X-ray diffraction data from a crystallised molecule or molecular complex;

- (b) applying at least a portion of the structure co-ordinates of ACE to said X-ray diffraction pattern to generate a three dimensional electron density map of at least a portion of the molecule or molecular complex; and
- 5 (c) using all or a portion of the structure co-ordinates of ACE to generate homology models of ACE.

42. An ACE modulator identified by the method of any one of claims 28 to 36.

- 10 43. An ACE modulator according to claim 42 wherein the ACE modulator inhibits ACE.

44. A pharmaceutical composition comprising an ACE modulator according to claim 42 or claim 43 and a pharmaceutically acceptable carrier, diluent, excipient or
15 adjuvant or any combination thereof.

45. A method of preventing and/or treating an an ACE related disorder comprising administering a modulator of ACE according to claim 42 or claim 43 and/or a pharmaceutical according to claim 44 wherein said modulator of ACE or said
20 pharmaceutical is capable of causing a beneficial preventative and/or therapeutic effect.

46. A computer for producing a three-dimensional representation of ACE wherein said computer comprises:

25

- (a) a computer-readable data storage medium comprising a data storage material encoded with computer-readable data, wherein said data comprises the structure co-ordinates of ACE;
- 30 (b) a working memory for storing instructions for processing said computer-readable data;
- (c) a central-processing unit coupled to said working memory and to said computer-

readable data storage medium for processing said computer-machine readable data into said three-dimensional representation; and

- 5 (d) a display coupled to said central-processing unit for displaying said three-dimensional representation.

47. A machine-readable data storage medium comprising a data storage material encoded with machine readable data, wherein the data is defined by at least a portion of the structure co-ordinates of ACE in Table A or Table B.

10

48. Use of an ACE crystal in the preparation of a medicament to prevent and/or treat an ACE related disorder.

49. Use according to claim 48 wherein the ACE related disorder is hypertension.

15

50. Use of at least a portion of the structure co-ordinates of Table A or Table B to screen for modulators of ACE.

51. Use of at least a portion of the structure co-ordinates of Table A or Table B to solve the structure of the crystalline form of any other protein with significant amino acid sequence homology to any functional domain of ACE.

20

52. Use of at least a portion of the structure co-ordinates of Table A or Table B in molecular design techniques to design, select and synthesise modulators of ACE.

25

53. Use of at least a portion of the structure co-ordinates of Table A or Table B in the development of compounds that can isomerise to reaction intermediates in the chemical reaction of a substrate or other compound that binds to ACE.

30 54. Use of at least a portion of the structure co-ordinates of Table A or Table B to screen small molecule databases for chemical entities or compounds that modulate ACE.

55. Use of at least a portion of the structure co-ordinates of Table A or Table B to solve the structure of the crystalline form of any other protein with significant amino acid sequence homology to any functional domain of ACE.
- 5 56. Use according to claim 55 wherein the structure of the crystalline form of any other protein with significant amino acid sequence homology to any functional domain of ACE is solved using molecular replacement.
57. pLEN- tACE Δ 36g(1, 2, 3, 4).
- 10 58. pLEN- tACE Δ 36g(1,3).

Figure 1
1/13

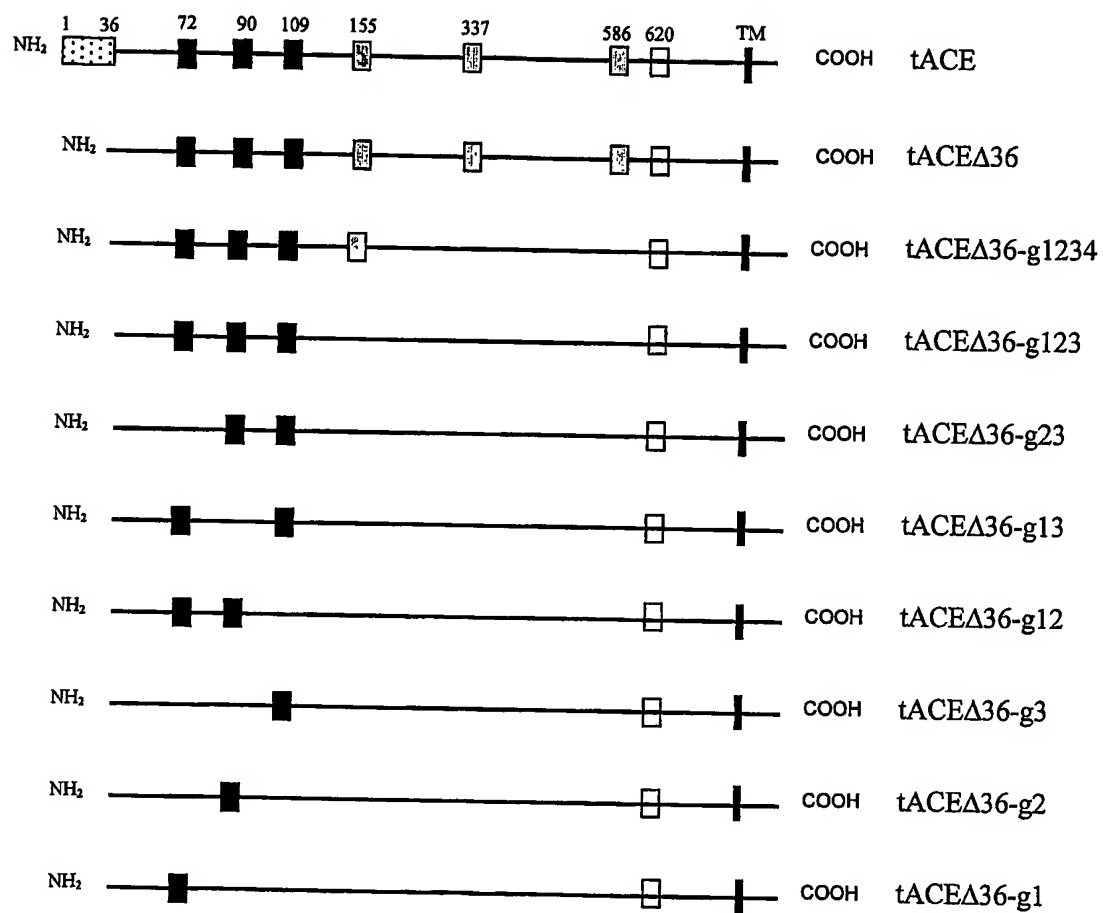


Figure 2
2/13

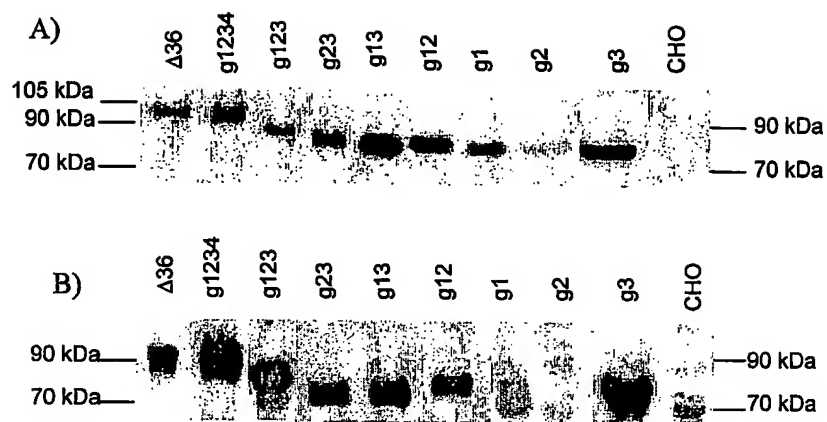


Figure 3
3/13

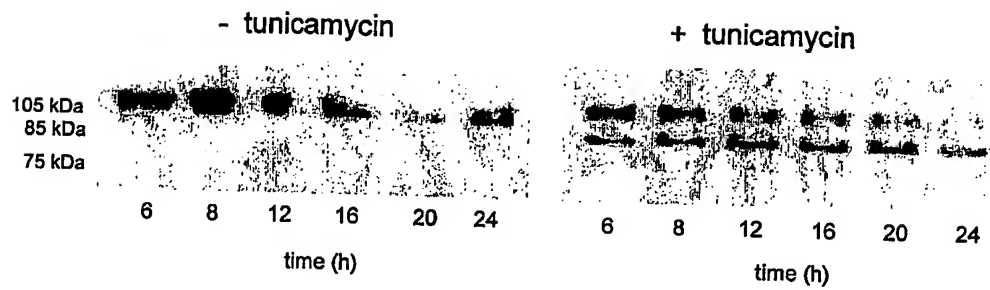


Figure 4
4/13

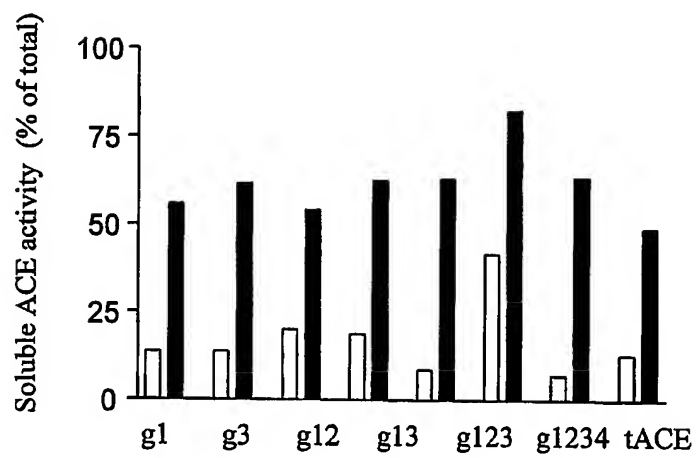


Figure 5
5/13

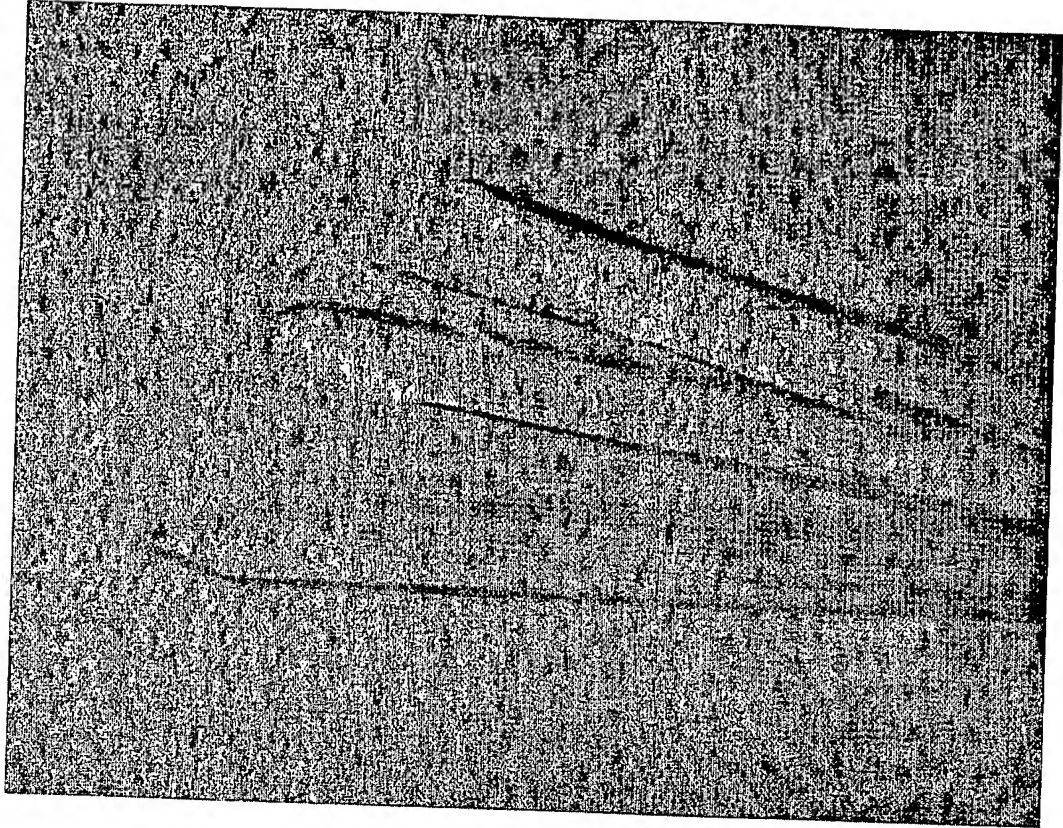


Figure 6
6/13

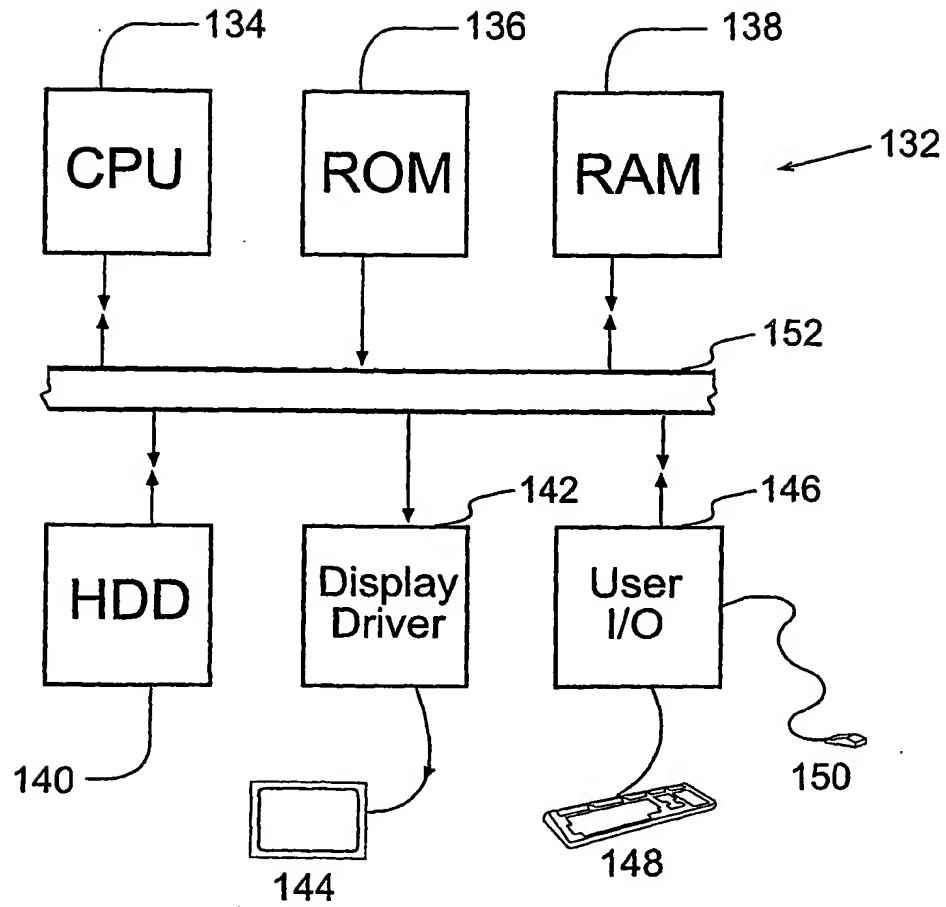


Figure 7A
7/13

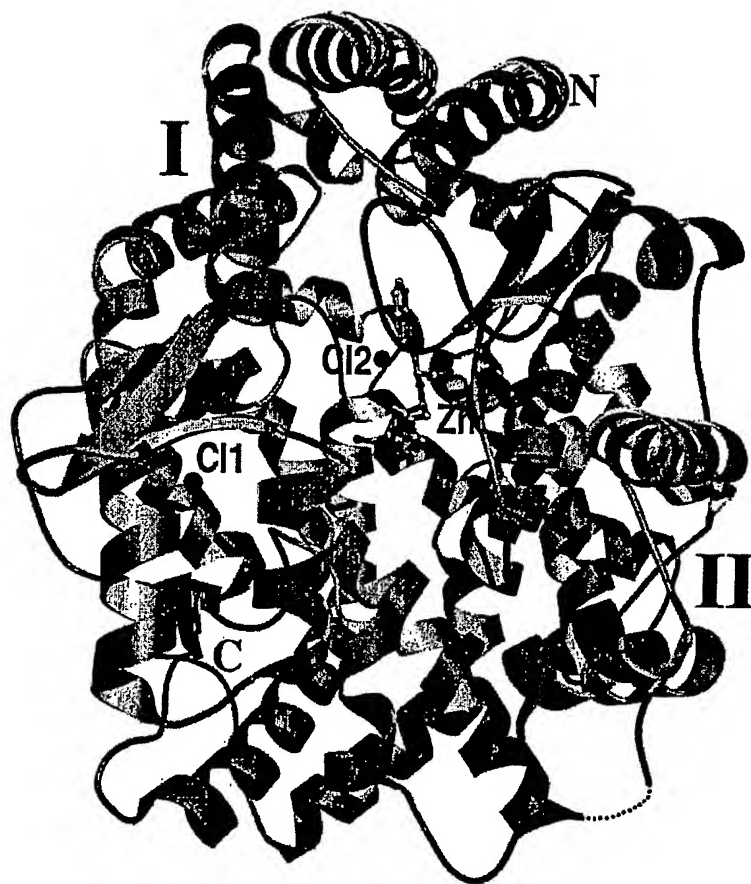


Figure 7B
8/13

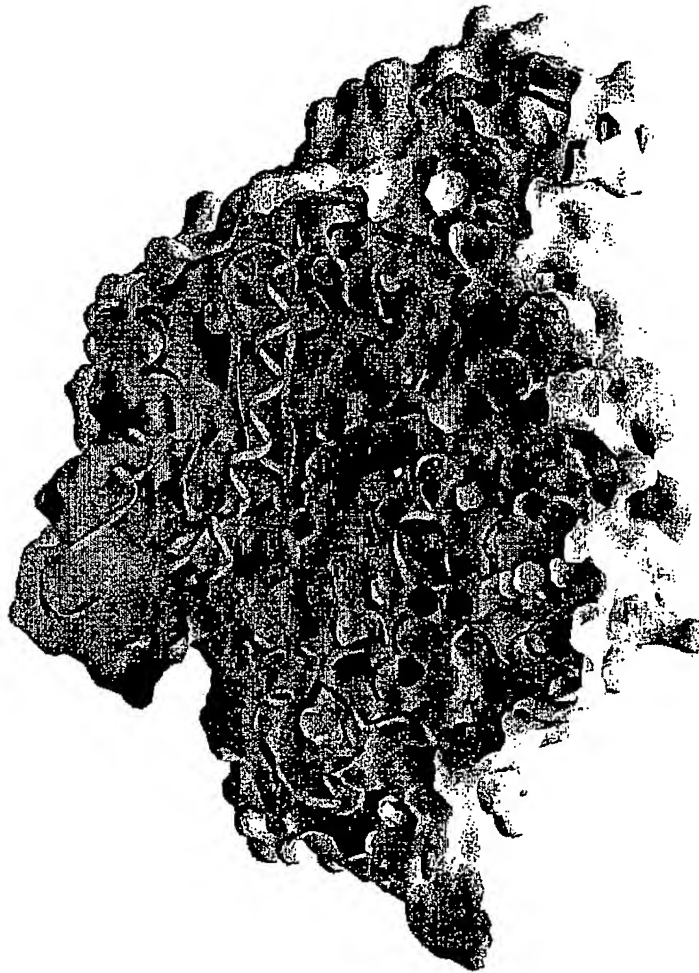


Figure 7C

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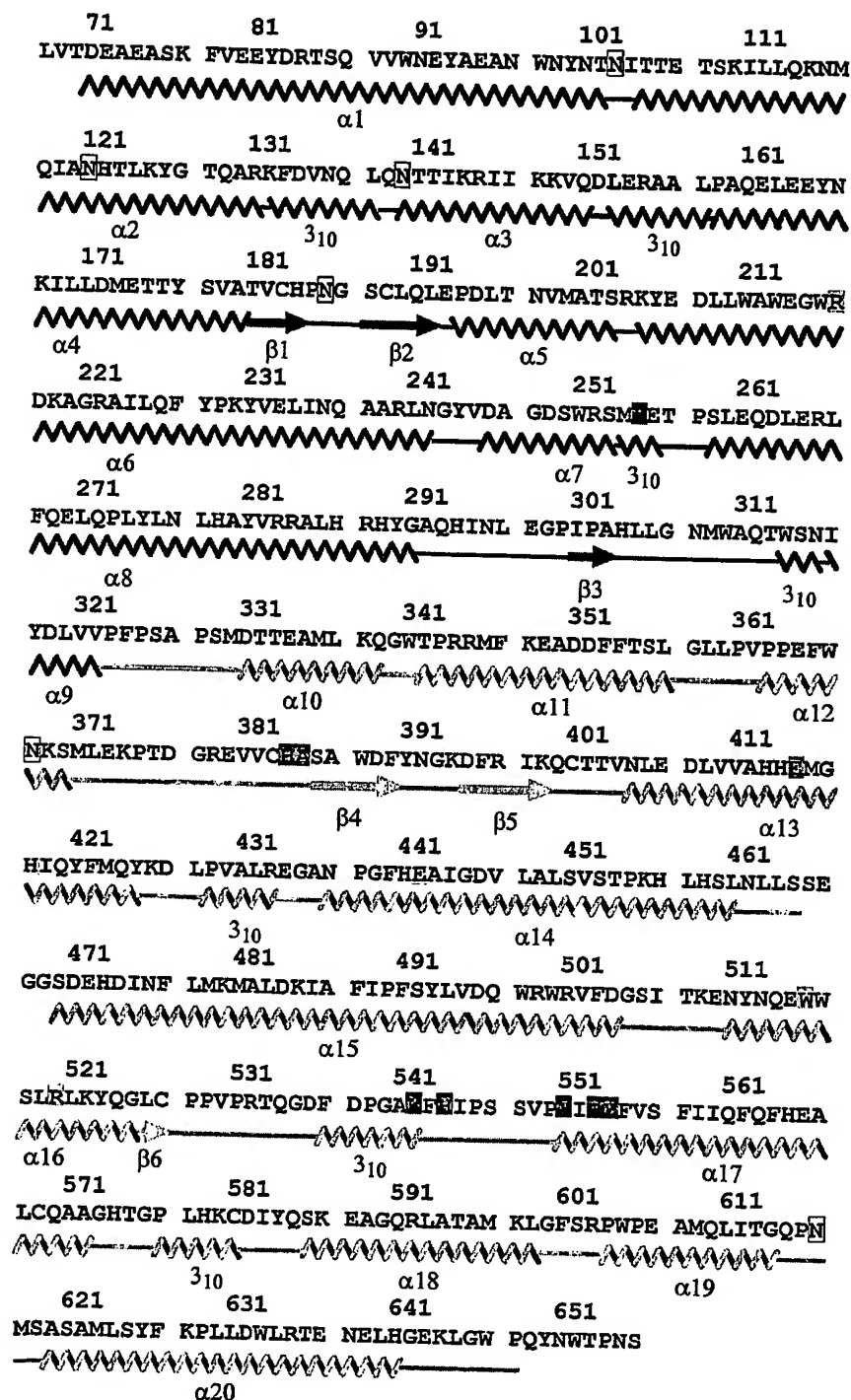


Figure 8A
10/13

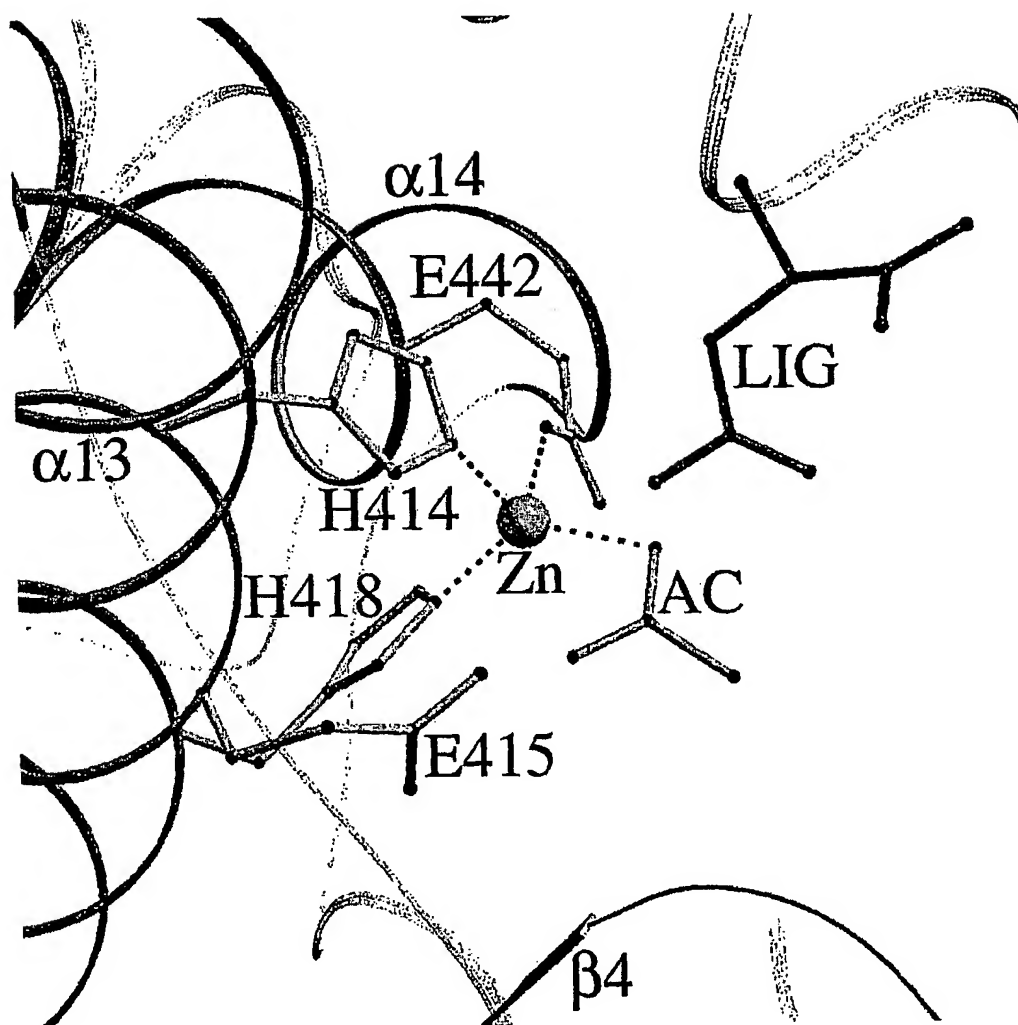


Figure 8B

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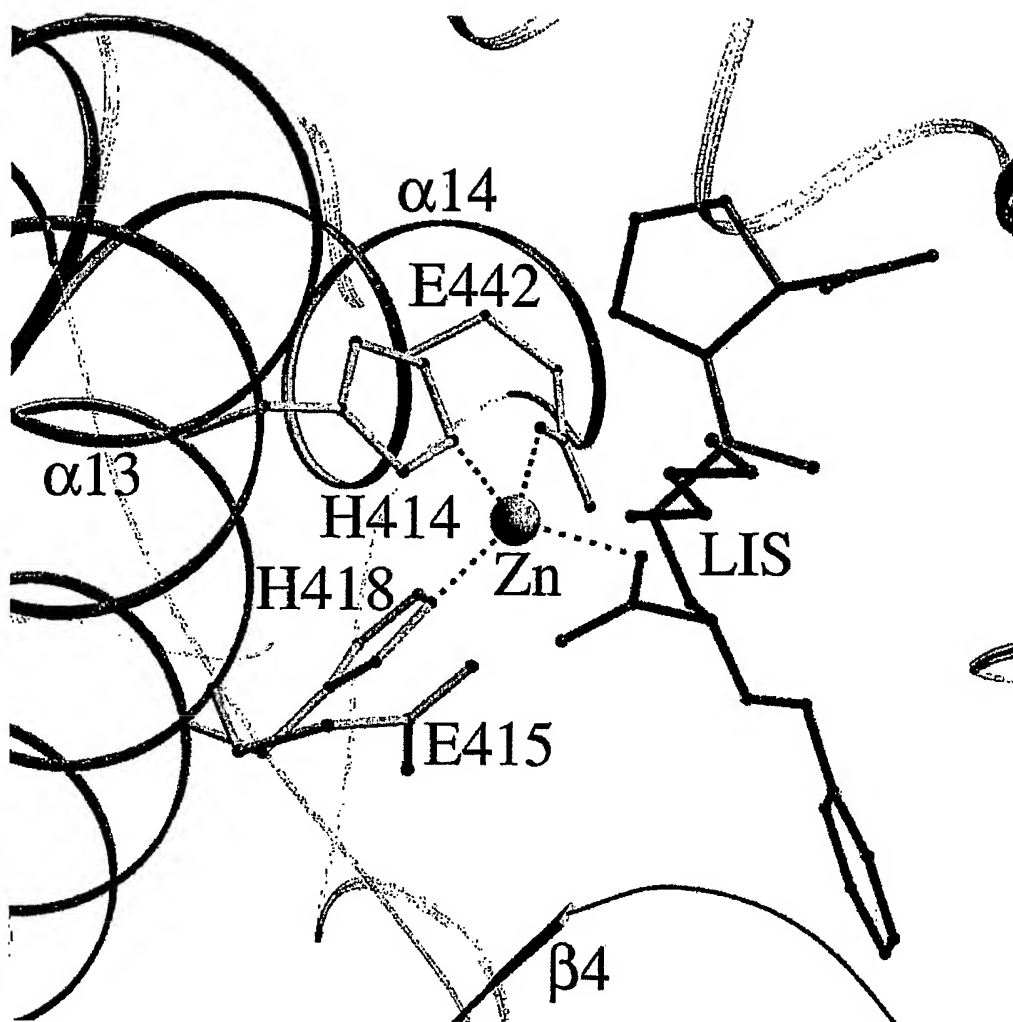


Figure 9A
12/13

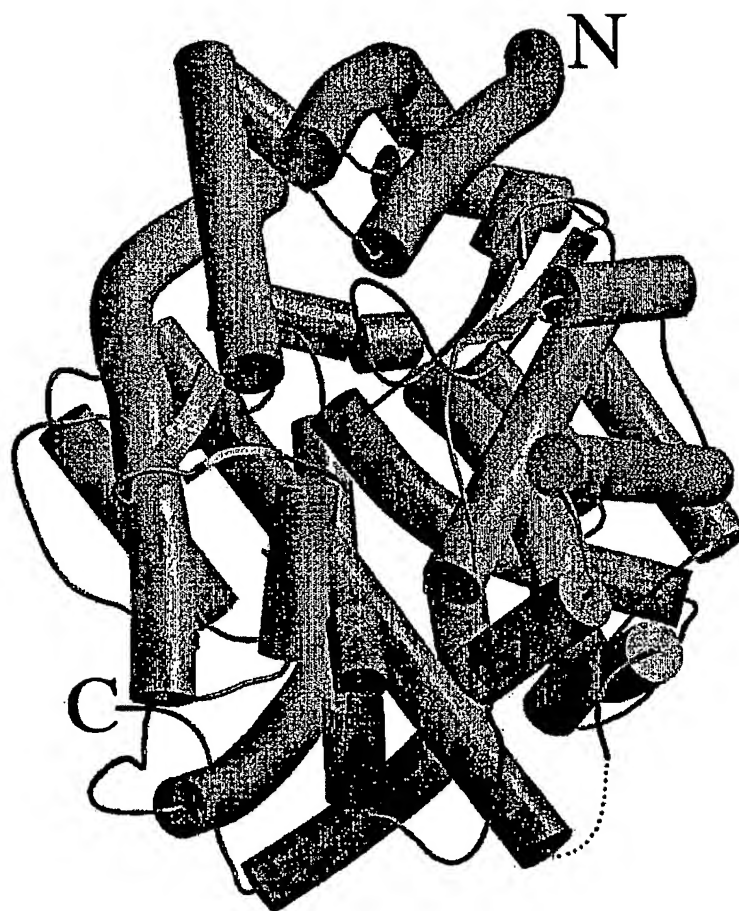
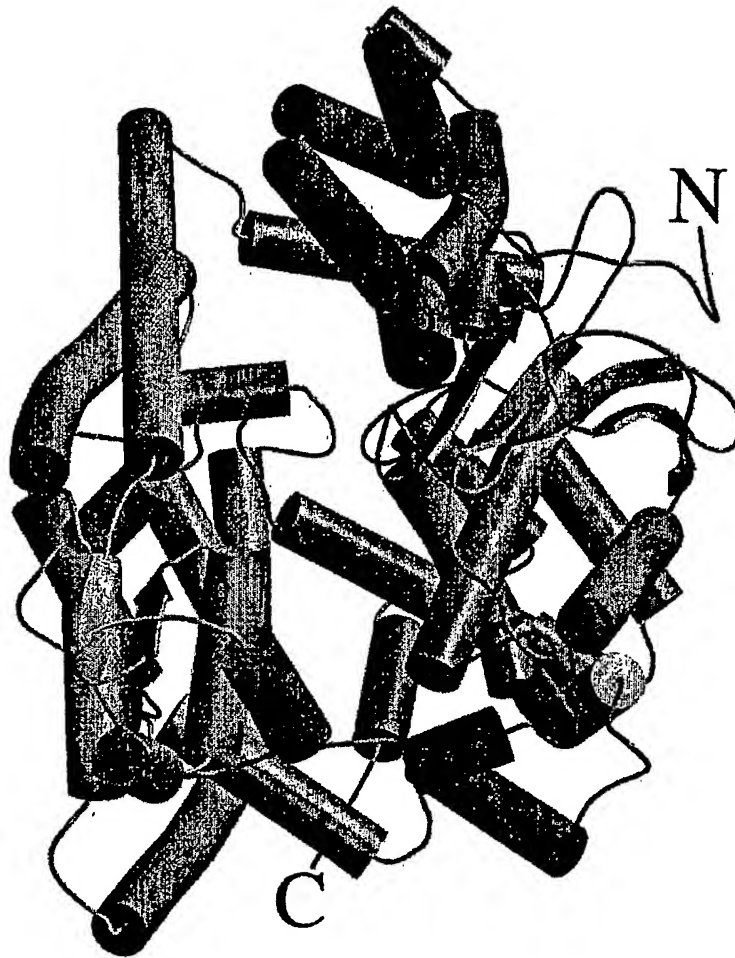


Figure 9B
13/13



INTERNATIONAL SEARCH REPORT

Internat Application No

PCT/GB 03/03966

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07K14/705 C12N9/48 G01N33/68 G06F19/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, WPI Data, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>YU X CHRISTOPHER ET AL: "Identification of N-linked glycosylation sites in human testis angiotensin-converting enzyme and expression of an active deglycosylated form"</p> <p>JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 272, no. 6, 1997, pages 3511-3519, XP002269906 & ISSN: 0021-9258</p> <p>See Material and Methods, page 3518 and Fig. 8 and last paragraph of conclusion the whole document</p> <p style="text-align: center;">----- -/--</p>	1-41, 48-58

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *A* document member of the same patent family

Date of the actual completion of the international search

12 February 2004

Date of mailing of the international search report

25/02/2004

Name and mailing address of the ISA

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Authorized officer

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INTERNATIONAL SEARCH REPORT

Intern. of Application No.

PCT/GB 03/03966

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WHITTLE P J ET AL: "PROTEIN STRUCTURE-BASED DRUG DESIGN" ANNUAL REVIEW OF BIOPHYSICS AND BIOMOLECULAR STRUCTURE, ANNUAL REVIEWS INC., PALO ALTO, CA, US, vol. 23, 1994, pages 349-375, XP001008225 ISSN: 1056-8700 see page 350-352, Fig. 1, page 355 and summary the whole document	1-41, 48-58
Y	GSCHWEND D A ET AL: "MOLECULAR DOCKING TOWARDS DRUG DISCOVERY" JOURNAL OF MOLECULAR RECOGNITION, HEYDEN & SON LTD., LONDON, GB, vol. 9, 1996, pages 175-186, XP000882526 ISSN: 0952-3499 the whole document see in particular the different possible ligand docking strategies	28-41, 48-56
A	WO 91/00354 A (INST NAT SANTE RECH MED) 10 January 1991 (1991-01-10) the whole document	1-41, 48-58
A	EP 0 444 605 A (UNITIKA LTD) 4 September 1991 (1991-09-04) the whole document	1-41, 48-58
P,X	DATABASE PROTEIN DATA BANK 'Online! PDB; PDB Identification code 108A 7 February 2003 (2003-02-07), NATESH R. ET AL.: "Crystal structure of human ACE (native)" XP002269910 retrieved from WWW.RCSB.ORG accession no. 108A the whole document	1-41, 48-58
P,X	GORDON KERRY ET AL: "Deglycosylation, processing and crystallization of human testis angiotensin-converting enzyme." BIOCHEMICAL JOURNAL, vol. 371, no. 2, 15 April 2003 (2003-04-15), pages 437-442, XP002269907 & ISSN: 0264-6021 the whole document	1-41, 48-58

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INTERNATIONAL SEARCH REPORT

Internat

Application No

PCT/GB 03/03966

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	KIM HO MIN ET AL: "Crystal structure of Drosophila angiotensin I-converting enzyme bound to captopril and lisinopril." FEBS LETTERS. 13 MAR 2003, vol. 538, no. 1-3, 13 March 2003 (2003-03-13), pages 65-70, XP002269908 ISSN: 0014-5793 the whole document -----	1-41, 48-58
T	NATESH RAMANATHAN ET AL: "Crystal structure of the human angiotensin-converting enzyme-lisinopril complex." NATURE (LONDON), vol. 421, no. 6922, 30 January 2003 (2003-01-30), pages 551-554, XP002269909 & ISSN: 0028-0836 the whole document -----	1-41, 48-58

INTERNATIONAL SEARCH REPORT

Int. application No.
PCT/GB 03/03966**Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)**

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 46-47
because they relate to subject matter not required to be searched by this Authority, namely:
see FURTHER INFORMATION sheet PCT/ISA/210
2. ☒ Claims Nos.: 42-45
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful international Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.1

Claims Nos.: 46-47

Claims 46-47 relate to presentation of information (Rule 39.1(v) PCT) Concerning claims 46-47 applicant's attention is drawn to Rule 39.1(v) PCT. The subject-matter of claims 46-47 refers to the presentation of structure data and is not regarded as patentable invention within the meaning of Rule 67 (v) PCT since it relates to a presentation of information (protein model structure coordinates) as a coordinate listings (or structure factor data) and their use, or information stored on a computer or computer readable media. Thus, the above mentioned claims will not be searched.

Continuation of Box I.2

Claims Nos.: 42-45

Claims 42-45 relate to reach-through compounds and their use in methods or pharmaceutical composition:

Present claims 42-44 relate to an "ACE modulator" defined by reference to a its potential action on the ACE activity.

The claims cover all products having this characteristic or property, whereas the application provides support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for no such products (only the known inhibitors are mentioned in the description). In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT).

A meaningful search cannot be established because it is not possible to determine if any of the presently known substances is falling under the terms of these "modulators" use/product claims. Besides it is noted, that the use of compounds of claim 42 are not rendered novel just because of the fact that the compounds have been identified by the method of claims 28-36, e.g. such compounds and their specific use can already exist.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5),

FURTHER INFORMATION CONTINUED FROM PCT/SA/ 210

should the problems which led to the Article 17(2) declaration be overcome.

INTERNATIONAL SEARCH REPORT

Information on patent family members

Internal Application No
PCT/GB 03/03966

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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